

## **POLICY**

Pierce Construction and Maintenance Co., Inc. has implemented this program to ensure employees are informed of any chemical hazards and hazardous or toxic substances in their workplace:

Pierce Construction and Maintenance Co., Inc. will develop, implement, and maintain at each workplace a written hazard communication program that describes how labels and other forms of warning, safety data sheets, and employee information will be accomplished.

A copy of the Company's Hazard Communication Program is available to all employees, and will be kept at each jobsite by the foreman in charge, or in the office. Translations of the hazard communication program are available to non-English speaking employees upon request from The Director of Safety.

Employees will be notified of any hazardous substances used by any company other than Pierce Construction and Maintenance Co., Inc. in the workplace, and make safety data sheets available to employees.

A list of all chemicals known to be used at the workplace by company employees will be available for review at the jobsite and in the office. Safety Data Sheets (SDS) for all chemicals used in the workplace by Pierce Construction and Maintenance Co., Inc. are available to employees at the worksite from the job foreman or in the office.

Changes of job assignments, changes in materials used, or any non-routine tasks involving hazardous substances or conditions will require notification and/or retraining of effected employees. The Director of Safety will inform or retrain employees of any new or additional hazards, detail methods of hazard abatement or elimination, and provide proper personal protective equipment or engineering controls necessary for the job. Notifications and retraining will be documented as to name of employee, date, description of action taken, and verification by The Director of Safety.

## **CONTAINER LABELING**

The Director of Safety will ensure that each container of hazardous chemicals in the workplace is labeled, tagged, or marked with the following information:

- Identity of the hazardous chemical(s)
- Pictograms
- A signal word
- Hazard and precautionary statements
- The product identifier
- Supplier identification

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The Director of Safety will ensure labels or other, written warning forms, are legible and prominently displayed on the container, or readily available in the work area throughout each work shift. When Pierce Construction and Maintenance Co., Inc. has employees, whose primary language is not English, information shall be presented in their language as well.

No container will be released for use until this information is verified. The Director of Safety will ensure that all containers are labeled with a copy of the original manufacturer's label or a label that has the appropriate identification and hazard warning.

### **SAFETY DATA SHEETS**

A SDS will be gathered and made available for every hazardous material at the worksite.

SDS are readily available for review to all Pierce Construction and Maintenance Co., Inc. employees, and cover all hazardous chemicals used in the workplace. SDS are kept with the hazard communication plan at the office location listed above. The safety data sheets are updated and managed by The Director of Safety. If a safety data sheet is not available for a hazardous chemical, before use, notify The Director of Safety, and a SDS will be obtained for the chemical to be used.

### **TRAINING**

#### **Required Hazard Communication Training**

If you have employees who may be exposed to hazardous chemicals, you must inform them about the chemicals and train them when they are hired and whenever they are exposed to a new chemical hazard or a process change. Required employee training includes:

- An overview of the requirements in OSHA's CFR 29 1910.1200 hazard communication
- The written hazard-communication plan, and where it may be reviewed
- Hazardous chemicals present in their workplace
- The operations where hazardous chemicals are used
- Physical and health effects of the hazardous chemicals
- Methods used to determine the presence or release of hazardous chemicals in the work area
- How to reduce or prevent exposure to these hazardous chemicals through use of control/work practices and personal protective equipment
- Where to find and how to read the hazard-communication plan, the list of hazardous chemicals, and SDS
- The physical and health hazards of hazardous chemicals used by employees
- The meaning of warning labels on hazardous-chemical containers and on pipes that contain hazardous substances
- Emergency procedures to follow if an employee is exposed to these chemicals
- How to use personal protective equipment

## Label Elements Training

Pierce Construction and Maintenance Co., Inc. will ensure all employees know the following elements of the labels: product identifier, signal word, pictogram, hazard statement, precautionary statement, and name address and phone number of chemical manufacturer, distributor, or importer.

Employees will also be trained on how to use the labels, to ensure proper storage and quickly locate first aid information.

They also need to know how the elements work together on a label.

- The different pictograms to indicate multiple hazards
- Where there are similar precautions, the one with most protective information will be on the label

## SDS Training

Employees will be trained on the standardized 16-section format and the type of information found in each one.

Training will also explain how the SDS information is related to the label information.

After attending the training, each employee will sign a company training form verifying they understand the above topics and how the topics are related to our hazard communication plan.



**Hazardous Non-Routine Tasks**

Before employees perform non-routine tasks that may expose them to hazardous chemicals, they will be informed by their supervisors about the chemicals' hazards. Their supervisors also will inform them about the safe work practices necessary to control exposure and what to do in an emergency. Examples of non-routine tasks that may expose employees to hazardous chemicals include the following:

<b>Task:</b>	<b>Hazard:</b>

**Hazardous Chemicals in Pipes, Closed, or Hidden Systems**

Before working in areas where hazardous chemicals are transferred through pipes or where pipes are insulated with asbestos-containing material, employees will contact \_\_\_\_\_ for the following information: the chemicals in the pipes; the physical or health effects of the chemicals or the asbestos insulation; the safe work practices to prevent exposure.

**Notification of Contractors**

It is the responsibility of the assigned job foreman to provide any workplace-associated contractors and their employees with the following information, if they may be exposed to hazardous chemicals in our workplace:

- The identity of the chemicals, how to review safety data sheets, and an explanation of the container and pipe labeling system
- Safe work practices to prevent exposure

This person will also obtain a safety data sheet for any hazardous chemical a contractor brings into the workplace to which an employee of Pierce Construction and Maintenance Co., Inc. may be exposed.

## Hazard Communication in the Workplace

The essence of hazard communication is a warning. We use thousands of chemical products throughout our lives, at home and at work. However, most of us would be hard-pressed to distinguish safe products from hazardous ones without a warning (the familiar skull-and-crossbones, for example). The warning tells us the product is hazardous, that it can harm us if we use it improperly.

In the workplace, hazard communication ensures workers who may be exposed to hazardous chemicals know about the chemicals' hazards and understand how to protect themselves from exposure.

## The Hazard Communication Process

Hazard communication begins when chemical manufacturers and importers evaluate their products to determine each product's chemical hazards. Next, they prepare a Safety Data Sheet (SDS) for each product. An SDS includes detailed information about the product's hazards. Manufacturers and importers must include an SDS and a warning label with each container of product they ship to a customer.

The part of the process that affects your workplace is the "Written Hazard Communication Plan." The plan identifies hazardous chemicals at your workplace and describes how you will use safety data sheets, warning labels, and training to protect employees and keep informed about the product's chemical hazards.

The labeling system, location of SDS, routine precautions and emergency procedures will be provided to other employers and employees who may be affected by hazardous chemicals produced, used, or stored at the worksite.

## Definition of a Hazardous Chemical

OSHA's hazard-communication rule, 1910.1200, defines a hazardous chemical as "any element, chemical compound, or mixture that is a physical hazard or a health hazard".

## Chemicals that are Physical Hazards

Chemicals that are physical hazards are unstable and, when handled improperly, can cause fires or explosions. A chemical that is a physical hazard has one of the following characteristics:

- Is a combustible liquid
- Is a compressed gas
- Is explosive
- Is flammable
- Is water-reactive
- Starts or promotes combustion in other materials
- Can ignite spontaneously in air

## Chemicals that are Health Hazards

Chemicals that are health hazards can damage an exposed person's tissue, vital organs, or internal systems. Generally, the higher the chemical's toxicity, the lower the amount or dose necessary for it to have harmful effects. The effects vary from person to person, ranging from temporary discomfort to permanent damage, depending on the dose, the toxicity, and the duration of exposure to the chemical.

Health effects range from short-duration symptoms that often appear immediately (acute effects) to persistent symptoms that may appear after longer exposures (chronic effects). Health effects can be classified by how they affect tissue, vital organs, or internal systems:

- Agents that damage the lungs, skin, eyes, or mucous membranes
- Carcinogens cause cancer
- Corrosives damage living tissue
- Hematopoietic agents affect the blood system
- Hepatotoxins cause liver damage
- Sensitizers cause allergic reactions and Irritants cause inflammation of living tissue
- Nephrotoxins damage cells or tissues of the kidneys
- Neurotoxins damage tissues of the nervous system
- Reproductive toxins damage reproductive systems, endocrine systems, or a developing fetus

## How to Determine Whether a Chemical is Hazardous

A chemical is hazardous if it is listed in any of the following documents:

- OSHA Division 2, Subdivision Z safety and health rules, Toxic and Hazardous Substances; Division 3, Subdivision Z, Toxic and Hazardous Substances (Construction); Division 4, Subdivision Z, Chemical/Toxins (Agriculture)
- Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment (latest edition). Published by the American Conference of Industrial Hygienists (ACGIH)
- The Registry of Toxic Effects of Chemical Substances, published by the National Institute for Occupational Safety and Health (NIOSH)
- The container label of the product will issue a warning of hazardous effects

**Commonly-Used Hazardous Chemicals**

Listed below are chemicals among those most commonly used in U.S. workplaces:

<b>Hazardous Chemical</b>	<b>Harmful Effects</b>
1,1,1-Trichloroethane	May cause mutations in cells; can irritate the skin and eyes and cause unconsciousness and death.  High exposures may damage the liver and kidneys.
Acetone	Can irritate the skin, eyes, nose, and throat. High concentrations can cause dizziness and loss of consciousness.
Aluminum oxide	Can irritate the eyes, nose, and throat. Repeated high exposure can cause scarring of the lungs and shortness of breath.
Ammonia	Can irritate the lungs and burn the eyes and skin. Long-term exposure can cause irritation of the eyes, nose, mouth, and throat.
Benzene	A cancer-causing agent that has been shown to cause leukemia. May also cause headaches and irritation of the eyes, nose, and throat. High exposure can cause convulsions and death.
Ethylbenzene	Can irritate the eyes, nose, and throat. Repeated contact can cause drying and scaling of skin and may cause liver damage. High concentrations may cause dizziness and loss of consciousness.
Ethylene glycol	Can irritate the eyes, nose, or throat and cause nausea, vomiting, and headaches. Repeated or high exposure levels can cause kidney damage or stones and brain damage. May cause birth defects.
Freon 113	May cause skin irritation and rashes as well as drowsiness.
Glycol ethers	Can irritate the eyes, nose, and throat and may cause birth defects. Repeated or high exposure can cause kidney damage or stones. Brain damage also may occur.
Hydrochloric acid	Can irritate the lungs. High exposure can cause buildup of fluid in the lungs, which can cause death.
Lead	Can cause weakness and insomnia. Higher exposure can result in damage to the nervous and reproductive systems.
Methanol	Irritates the eyes, nose, mouth, and throat and can cause liver damage.



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Hazardous Chemical	Harmful Effects
Methyl ethyl ketone	Can cause dizziness, headaches, blurred vision, and loss of consciousness. May cause birth defects.
Methyl isobutyl ketone	Irritates the skin, eyes, nose, and throat, and may cause dizziness, nausea, diarrhea, and loss of consciousness. Long-term exposure may damage the liver and kidneys.
Phenol	Can irritate the mouth, nose, throat, and eyes. Long-term exposure may damage the liver and kidneys and lead to genetic damage. May be a cancer risk. Major skin contact or inhaling it can cause death.
Sodium hydroxide	Breathing the dust or droplets can irritate and burn the lungs. Contact can cause severe skin burns.
Sulfuric acid	Can severely burn the skin and eyes. Repeated long-term exposure can cause bronchitis, shortness of breath, and emphysema.
Tetrachloroethylene	A suspected human carcinogen that has caused liver cancer in animals. It may damage the liver and kidneys after low but repeated exposure. It can cause dizziness and loss of consciousness.
Xylene	Can irritate the eyes, nose, and throat; high levels can cause loss of consciousness and death. It may damage fetuses. Repeated exposure may damage bone marrow and eyes and cause stomach problems.

### Using Safety Data Sheets

An SDS contains detailed information about a hazardous chemical product's health effects, physical and chemical characteristics, and safe practices for using it.

### Responsibilities of Chemical Manufacturers, Importers, and Distributors

Chemical manufacturers and importers must prepare an SDS for each hazardous chemical product they produce. Distributors are responsible for ensuring that you have an SDS for each hazardous chemical product they sell to you.

### What to do if You Use Hazardous Chemical Products at your Workplace

You must have a current SDS for each product. Employees must be able to review the SDS in their work area at any time. You can keep SDS in a notebook or on a computer, though employees must be able to obtain the information immediately in an emergency. One person should be responsible for managing all the SDS at your workplace. The person should ensure the list of hazardous chemicals is current, that the identity of each chemical on the list matches its identity on its SDS, and that incoming hazardous chemical containers have an SDS.

## **What to do When You No Longer Use a Hazardous Chemical at Your Workplace**

When you no longer use a hazardous chemical, you do not need to keep its SDS. However, you do need to keep a record of the chemical's identity, the locations, and the calendar years it was used in your workplace, for at least 30 years. For more information about record-keeping requirements, see the "Access to employee exposure and medical records" section of 1910.1020.

### **Information required on Safety Data Sheets**

Chemical manufacturers and importers must prepare an SDS for each hazardous chemical product they ship to you. The following information must appear on each sheet.

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.

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.

Section 11, Toxicological information includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.

Section 12, Ecological information\*

Section 13, Disposal considerations\*

Section 14, Transport information\*

Section 15, Regulatory information\*

\*OSHA does not require these sections.

Section 16, Other information, includes the date of preparation or last revision.

## Using Container Warning Labels

The purpose of a container warning label is to warn employees about the container's contents and to refer employees to an appropriate SDS for more information about the chemical's physical and health hazards. Manufacturers, importers, and distributors must ensure that each hazardous chemical product sold to you has a label that includes the chemical's identity, a hazard warning, and a name and address for additional information about the product. If you use hazardous chemicals at your workplace, you must ensure that each hazardous chemical container has a legible label, in English, that identifies the chemical and warns of its hazards.

## Containers that must be Labeled

Original containers of hazardous chemicals from a manufacturer, importer, or distributor must have warning labels. Do not remove or deface them. If you transfer a hazardous chemical from a labeled container to an unlabeled container, label the container.

## Contents of a Warning Label

A warning label must identify the chemical – a common chemical name or a code name is acceptable – and display a hazard warning such as DANGER or the familiar skull and crossbones.

- The identity of the chemical on the label, on its SDS, and on your hazardous chemical sheet must match
- If you are not sure a hazardous chemical container is properly labeled, contact the manufacturer or supplier
- Make someone at your workplace responsible for ensuring all hazardous-chemical containers are properly labeled

EXAMPLE OF ORIGINAL CONTAINER GHS LABEL

**SAMPLE LABEL**

**Product Identifier**

CODE \_\_\_\_\_  
Product Name \_\_\_\_\_

**Supplier Identification**

Company Name \_\_\_\_\_  
Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Postal Code \_\_\_\_\_ Country \_\_\_\_\_  
Emergency Phone Number \_\_\_\_\_


**Precautionary Statements**

Keep container tightly closed. Store in a 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 measures 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.

**In Case of Fire:** use dry chemical (BC) or Carbon Dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.

**First Aid**  
If exposed call Poison Center.  
If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.

**Hazard Pictograms**



**Signal Word**  
**Danger**

**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: \_\_\_\_\_

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**Secondary/Portable Containers**

Secondary containers are used to hold material transferred from the manufacturers' original container. These are required to be labelled if:

- Is not used within the work shift by the individual who makes the transfer
- The worker who made the transfer leaves the work area
- The container is moved to another work area and is no longer in the possession of the person who filled the container

Labels for secondary containers must include:

- The identity of the chemical and appropriate hazard warnings must be shown on the label.
- The hazard warning that provides users with an immediate understanding of the primary health and/or physical hazard(s) of the chemical through the use of words, pictures, symbols, or any combination of these elements
- The name and address of the manufacturer, importer or other responsible party

The hazard label message must be legible, permanently displayed and written in English

Portable containers are intended for immediate use of a chemical by the person who makes the transfer. Labels on portable containers are not required if the worker who made the transfer uses all of the contents during the work shift, or the chemical is return to a labelled primary or secondary container at the end of the shift, or when work is completed.



**Confirmation of Employee's Hazard Communication Training**

I, \_\_\_\_\_, have been informed about the hazardous chemicals that I may be exposed to during my work and I have received training on the following topics:

- An overview of the requirements in OSHA's hazard communication rules.
- Hazardous chemicals present in the workplace.
- The written hazard-communication plan.
- Physical and health effects of the hazardous chemicals.
- Methods to determine the presence or release of hazardous chemicals in the work area.
- How to reduce or prevent exposure to these hazardous chemicals through use of exposure controls/work practices and personal protective equipment.
- Steps we have taken to reduce or prevent exposure to these chemicals.
- Emergency procedures to follow if exposed to these chemicals.
- How to read labels and review Safety Data Sheets.

**Note to employee:**

This form becomes part of your personnel file; read and understand it before signing.

By signing below I attest and verify that I have received training in the above areas of hazard communication, and that I understand the content of that training.

Employee: \_\_\_\_\_ Date: \_\_\_\_\_

Trainer: \_\_\_\_\_ Date: \_\_\_\_\_