



# GHS-Aligned Hazard Communication Standard



**DCBS** | Consumer and  
Business Services  
Oregon OSHA

# GHS-Aligned Hazard Communication Standard

## About this guide

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## The essence of hazard communication

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The essence of hazard communication is knowledge and understanding. We use thousands of chemical products throughout our lives, at home and at work, but most of us would not be able to distinguish safe products from hazardous ones without information and training.

As children, we learned to recognize that symbols like Mr. Yuk mean we should NOT eat or drink things from under the kitchen sink.

Later, we learned that the skull and crossbones on a product label mean that product is toxic or deadly, if not handled properly.

OSHA's Hazard Communication Standard (HCS) requires employers to train their employees to recognize chemical hazards – using the information provided on product labels and in safety data sheets – and to take the necessary precautions to protect themselves.

### Hazard communication in the workplace

An effective hazard communication program ensures that workers who may be exposed to hazardous chemicals know about the chemical's hazards and understand how to protect themselves from those hazards.

Product labels and safety data sheets (SDS), formerly known as material safety data sheets (MSDS), are the main tools for developing a hazard communication program. They identify the hazardous properties of chemicals that may pose a health or physical hazard and provide guidance for appropriate protective measures.



# HCS and the GHS

In 2012, OSHA revised the HCS to be consistent with the United Nations' Globally Harmonized System (GHS) of classification and labeling of chemicals. The GHS is an international approach to hazard communication that provides specific criteria for classification of chemical hazards and a standardized approach to label elements and safety data sheets.



Since the United States is both a major importer and exporter of chemicals, American workers often see labels and safety data sheets required by other countries. As countries around the world adopt the GHS, chemicals will have consistent information, helping to ensure appropriate handling and safe use of workplace chemicals.

## Phase-in dates for the HCS requirements:

Effective Completion Date	Requirements	Who
Dec. 1, 2013	Train employees on the new label elements and safety data sheet (SDS) format.	Employers
Feb. 1, 2015		Agricultural employers
June 1, 2015	Compliance with all modified provisions of this final rule, except distributors have an additional six months to ship product, without GHS labels.	Chemical manufacturers, importers, distributors, and employers
Dec. 1, 2015	Must not ship containers without a GHS label.	Distributors
June 1, 2016	Update alternative work-place labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	All employers

# **Navigating Oregon OSHA's hazard communication rules**

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Oregon OSHA's hazard communication rules apply to all Oregon workplaces where employees may be exposed to hazardous chemicals during routine use or in an unforeseeable emergency. The purpose of these rules is to ensure that workers with a potential exposure to hazardous chemicals know the harmful effects of those chemicals and how to avoid being harmed.

Oregon OSHA's hazard communication rules affect employers in general industry, construction, agricultural workplaces, and forest activities.

## **HCS, general industry – Division 2/Z, 1910.1200**

1910.1200, the Hazard Communication Standard requires chemical manufacturers, importers, and distributors to classify the hazards of their chemical products and to provide that information in the form of labels and safety data sheets to users of the products. Employers must provide training and access to this information to their employees. The requirements apply to any hazardous chemical that may expose an employee under normal conditions of use or in a foreseeable emergency.

## **Other rules that refer to 1910.1200**

The following Oregon OSHA rules also require general industry employers to comply with the hazard communication requirements of 1910.1200:

- 1910.119 Process Safety Management of Highly Hazardous Chemicals
- 1910.120 Hazardous Waste Operations and Emergency Response
- 1910.1001 Asbestos
- 1910.1020 Access to Employee Exposure and Medical Records
- 1910.1026 Chromium VI
- 1910.1027 Cadmium
- 1910.1028 Benzene
- 1910.1047 Ethylene Oxide
- 1910.1048 Formaldehyde
- 1910.1050 Methylenedianiline
- 1910.1051 1,3-Butadiene
- 1910.1052 Methylene chloride
- 1910.1201 Retention of DOT Markings, Placards and Labels
- 1910.1450 Occupational Exposure to Hazardous Chemicals in Laboratories

- 437-002-0170 Worker Protection Standard
- 437-002-0377 Additional Oregon Rules for Hazard Communication
- 437-002-0378 Oregon Rules for Pipe Labeling

### **HCS, construction – Division 3/D, 1926.59**

Division 3/D, 1926.59 has been rescinded and now refers readers to 1910.1200 Hazard Communication. The requirements for hazard communication in construction work are identical to the general industry standard.

### **Other construction rules that refer to 1910.1200**

The following Oregon OSHA rules require construction employers to comply with the hazard communication requirements of 1910.1200:

- 1926.1101 Asbestos
- 1926.1126 Chromium VI
- 1926.1127 Cadmium
- 1926.65 Hazardous Waste Operations
- 1926.62 Lead

### **HCS, agriculture – Division 4/Z, 437-004-9800**

The HCS for agricultural employers has been scaled down to eliminate those parts of 1910.1200 that relate only to manufacturers, importers, and distributors. Employers' responsibilities include providing specific training about preventing exposure to agricultural chemicals.

### **Other agriculture rules that refer to 437-004-9800 or 1910.1200**

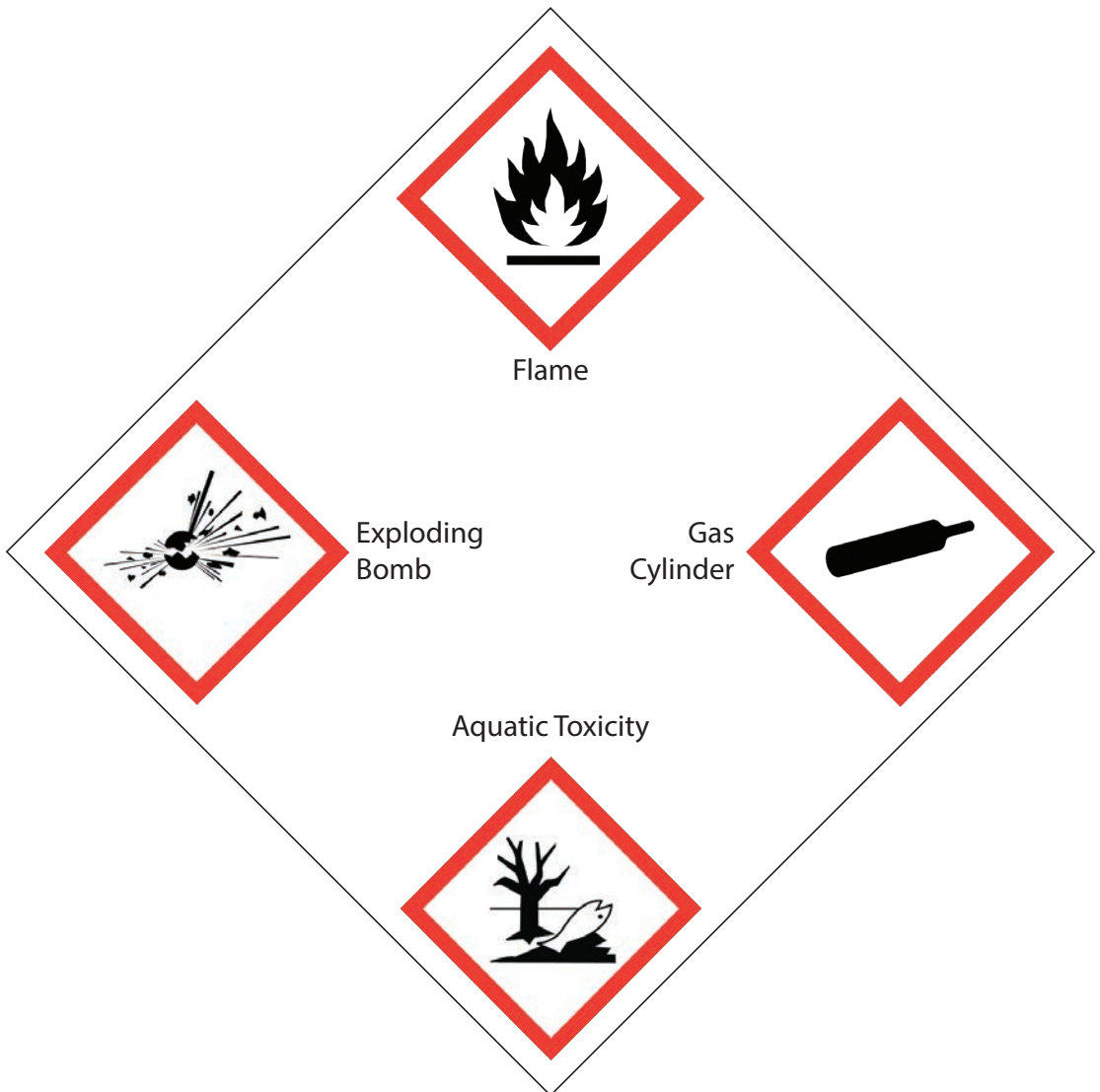
- Division 4/W, 437-004-6000 (40 CFR 170) Worker Protection Standard
- 437-004-9830 Retention of Dot Markings, Placards, and Labels
- 437-004-9860 Hazardous Chemicals in Laboratories



## HCS, forest activities – Division 7

The Division 7 rules for employers engaged in forest activities refer to Division 2/Z HCS:

- Division 7/N, 437-007-1305(2) requires employers to develop, implement, and maintain a written hazard communication program meeting the requirements of 1910.1200, Hazard Communication when employees are required to handle, mix, or apply hazardous chemicals.
- Division 7/F, 437-007-0580(2) requires that containers of flammable and combustible liquids be marked in accordance with 1910.1200, Hazard Communication.



# What is a hazardous chemical?

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The HCS defines a hazardous chemical as any chemical that is classified as a physical hazard, a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or a hazard not otherwise classified. Chemical manufacturers and importers must evaluate their products, and classify and categorize the physical, health, and other hazards.

## Chemicals that are health hazards

[Appendix A to 1910.1200](#) provides information about the classification of health hazards.

Chemicals are health hazards when they are classified as posing one of these hazardous effects:

- Acute toxicity (any route of exposure)
- Aspiration toxicity
- Carcinogenicity
- Germ cell mutagenicity
- Reproductive toxicity
- Respiratory or skin sensitization
- Serious eye damage or eye irritation
- Skin corrosion and irritation
- Specific target organ toxicity (single or repeated exposure)



Health effects can range from acute effects (symptoms of short duration or that appear immediately after an exposure) to chronic effects (persistent symptoms or those that appear after longer-term exposures.)

## Chemicals that are physical hazards

[Appendix B to 1910.1200](#) provides information about the classification of physical hazards.

Chemicals are physical hazards when they are classified as posing one of these hazardous effects:

- Corrosive to metals
- Explosive
- Flammable (includes aerosols, gases, liquids, and solids)
- Pressurized gases
- Organic peroxides
- Oxidizers (includes gases, liquids, and solids)

- Pyrophoric (includes liquids and solids)
- Self-heating substances
- Self-reactive substances
- Substances that emit flammable gases in contact with water

### **Simple asphyxiants**

A simple asphyxiant is a substance or mixture that displaces oxygen in the ambient atmosphere and can cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

### **Combustible dust**

Combustible dust is a particulate solid that becomes a fire or explosion hazard when suspended in air or in another oxidizing medium over a range of concentrations, regardless of the particle size or shape.

### **Pyrophoric gas**

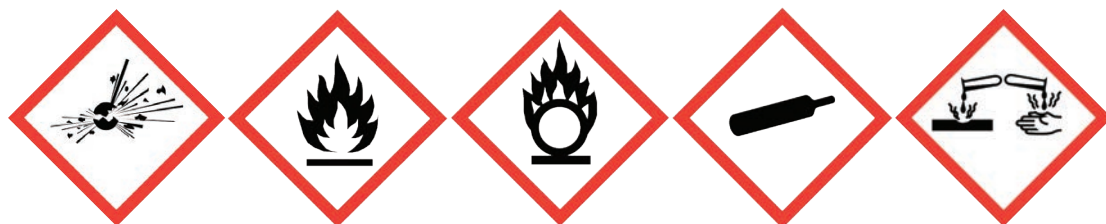
A pyrophoric gas is a chemical in a gaseous state that will ignite spontaneously in air at or below a temperature of 130 degrees F.

### **Hazards not otherwise classified (HNOC)**

HNOC describes adverse physical or health effects based on scientific evidence that does not currently meet federal OSHA's specified criteria for a physical or health hazard class. These hazards do not have to be disclosed on a label, but must be disclosed in Section 2, Hazard identification, of its safety data sheet.

## Some examples of chemicals classified as physical hazards







Chemical classification	Examples
Corrosive to metals	Hydrochloric acid, sulfuric acid
Explosive	Trinitrotoluene (TNT), nitroglycerin
Flammable (includes aerosols, gases, liquids, and solids)	Aerosols - spray paint, hairspray Gases - acetylene, hydrogen Liquids - gasoline, acetone Solids - aluminum powder, sulfur
Pressurized gas	Oxygen, acetylene, helium
Organic peroxide	Methyl ethyl ketone peroxide, benzoyl peroxide, acetone peroxide
Oxidizer (includes gases, liquids, and solids)	Gases – oxygen, fluorine, chlorine Liquids – perchloric acid, bromine Solids – strontium peroxide, aluminum nitrate
Pyrophoric (includes liquids and solids)	Liquids - tributylphosphine, triethylborane Solids – lithium, pentaborane, phosphorus
Self-heating substance	Rags impregnated with linseed oil
Self-reactive substance	Benzene sulpho-hydrazide
Substance that emits flammable gases in contact with water	Sodium, lithium, calcium carbide



## Want to learn more about chemical hazards and the classification system?

GHS links and information, including the United Nations' Purple Book.

Federal OSHA's [Hazard Communication](#) topic page.

<h3>Health Hazard</h3>  <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>	<h3>Flame</h3>  <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>	<h3>Exclamation Mark</h3>  <ul style="list-style-type: none"><li>▪ Irritant (skin and eye)</li><li>▪ Skin Sensitizer</li><li>▪ Acute Toxicity</li><li>▪ Narcotic Effects</li><li>▪ Respiratory Tract Irritant</li><li>▪ Hazardous to Ozone Layer (Non-Mandatory)</li></ul>
<h3>Gas Cylinder</h3>  <ul style="list-style-type: none"><li>▪ Gases Under Pressure</li></ul>	<h3>Corrosion</h3>  <ul style="list-style-type: none"><li>▪ Skin Corrosion/Burns</li><li>▪ Eye Damage</li><li>▪ Corrosive to Metals</li></ul>	<h3>Exploding Bomb</h3>  <ul style="list-style-type: none"><li>▪ Explosives</li><li>▪ Self-Reactives</li><li>▪ Organic Peroxides</li></ul>
<h3>Flame Over Circle</h3>  <ul style="list-style-type: none"><li>▪ Oxidizers</li></ul>	<h3>Environment (Non-Mandatory)</h3>  <ul style="list-style-type: none"><li>▪ Aquatic Toxicity</li></ul>	<h3>Skull and Crossbones</h3>  <ul style="list-style-type: none"><li>▪ Acute Toxicity (Fatal or Toxic)</li></ul>

See Appendix A for an explanation of pictograms.

# Chemicals in the workplace that are excluded from the requirements of the HCS

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Certain types of chemicals are not included under the requirements of the HCS because other regulatory agencies have rules that apply to them, they are not a product of a manufacturing process, or they are not considered to be chemicals.

## The requirements of the HCS do not apply to:

- Hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) when subject to regulations issued under that act by the Environmental Protection Agency (EPA).
- Any hazardous substance as defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that is the focus of remedial or removal action being conducted under CERCLA in accordance with EPA regulations.
- Tobacco or tobacco products.
- Wood or wood products, including lumber that will be used whole (not processed or cut, generating dust), where the manufacturer can establish that the only hazard is the potential for flammability or combustibility. Wood or wood products that have been treated with a hazardous chemical covered by this standard are not exempted.
- Articles – A manufactured item that does not pose a physical or health risk when used normally.
- Retail food or alcoholic beverages, such as those sold in grocery stores or restaurants, or consumed by employees in the workplace.
- Any drug, as defined in the Federal Food, Drug, and Cosmetic Act when it is in solid, final form such as tablets or pills; retail, over-the-counter drugs, and other drugs, such as first-aid supplies, intended for employees in the workplace.
- Cosmetics packaged for retail sale to consumers and cosmetics used by employees in the workplace.
- A consumer product, as defined in the Consumer Product Safety Act, where the employer can show that it is used in the workplace for the purpose intended by the manufacturer and resulting in an exposure equivalent to the range of exposures (duration and frequency) that could reasonably be experienced by consumers.
- Nuisance particulates (dust) that the chemical manufacturer can establish pose no covered physical or health hazard.
- Ionizing and nonionizing radiation.
- Biological hazards.

# What if employees handle chemicals only in unopened, sealed containers?

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**If under normal conditions of use, such as in a warehouse or in a retail establishment, your employees only handle chemicals in unopened containers, you must:**

- Ensure that labels on incoming containers of hazardous chemicals are not removed or defaced.
- Maintain copies of any safety data sheets that are received with incoming shipments of the sealed containers of hazardous chemicals.
- Obtain a safety data sheet as soon as possible for sealed containers of hazardous chemicals received without a safety data sheet if an employee requests the safety data sheet.
- Ensure that the safety data sheets are readily accessible to your employees during each work shift when they are in their work areas.
- Ensure that employees are provided with information and training to the extent necessary to protect them in the event of a spill or leak of a hazardous chemical from a sealed container.

For more information, see “Responsibilities of suppliers to provide safety data sheets” on page 19.



## What about hazardous chemicals in laboratories?

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The HCS has more limited requirements for employers at laboratories. However, laboratory employers that ship hazardous chemicals are considered to be either a chemical manufacturer or a distributor under this rule. Laboratory employers must:

- Ensure that labels on incoming containers of hazardous chemicals are not removed or defaced.
- Maintain any safety data sheets that are received with incoming shipments of hazardous chemicals, and ensure that they are readily accessible to laboratory employees during their shift when they are in their work areas.
- Ensure that employees are provided all the required information and training, except for the location and availability of the written hazard communication program.
- Ensure that any containers of hazardous chemicals leaving the laboratory are labeled in accordance with 1910.1200(f), and that a safety data sheet is provided to distributors and other employers in accordance with 1910.1200 (g)(6) and (g)(7).

### A rule that applies to certain laboratories, instead of HCS

Division 2/Z, 1910.1450, [Occupational exposure to hazardous chemicals in laboratories](#) applies to all employers engaged in the laboratory use of hazardous chemicals as defined below. In laboratories where this rule applies, it applies instead of the HCS.

**Laboratory use of hazardous chemicals** means handling or use of such chemicals in which all of the following conditions are met:

- Chemical manipulations are carried out on a laboratory scale
- Multiple chemical procedures or chemicals are used
- The procedures involved are not part of a production process, nor in any way simulate a production process
- Protective laboratory practices and equipment are available and in common use to minimize the potential for employee exposure to hazardous chemicals



**Laboratory scale** means work with substances in which the containers used for reactions, transfers, and other handling of substances are designed to be easily and safely manipulated by one person. It excludes those workplaces whose function is to produce commercial quantities of materials.

**Protective laboratory practices and equipment** means those laboratory procedures, practices, and equipment accepted by laboratory health and safety experts as effective, or that the employer can show to be effective, in minimizing the potential for employee exposure to hazardous chemicals.



## How does hazard communication work?

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Hazard communication begins when chemical manufacturers and importers evaluate the chemicals they produce or import; classify the chemical's health, physical, and other defined hazards; and determine the appropriate hazard categories for each class of hazard.

Chemical manufacturers and importers must prepare labels for their products that include signal words, pictograms, hazard statements, and other elements that reflect each hazard class and category.

They must also prepare a safety data sheet for each product. A safety data sheet includes detailed information about the product's hazards. Manufacturers and importers must provide a safety data sheet and a label with each product that they ship to a customer. Employers and employees need this information about the product's hazards to know how to safely handle the product.

The part of the process that affects all employers is the written hazard communication plan. The plan, which must be specific to each workplace, must list the hazardous chemicals at your facility and describe how you will use safety data sheets, labels, and training to inform employees about the product's chemical hazards and the necessary precautions.



## Steps in the hazard communication process

1. Chemical manufacturers and importers classify and categorize the chemicals they produce according to specific criteria that describe the chemical's health, physical, and other specified hazards.
2. Manufacturers and importers use this classification and category to determine the standardized information they must provide on labels and in safety data sheets.
3. Your workplace purchases hazardous chemical products from the manufacturer, distributor, or importer. Each shipped container of hazardous chemical must have a label and include a safety data sheet that classifies the chemical and provides specific information about its hazards.
4. The employer must prepare a written hazard communication plan that:
  - a. Lists all the hazardous chemicals that employees may be exposed to at their workplace, using product identifiers that are cross-referenced to the label and the safety data sheet.
  - b. Describes how that particular workplace will use the plan, the safety data sheets, the labels, and training to keep employees safe.
5. The employer assigns responsibilities for all the elements of the hazard communication plan.
6. The employer ensures that the program is maintained and updated as needed.

# Preparing your written hazard communication plan

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You must prepare a written hazard communication plan if employees at your workplace use or may be exposed to hazardous chemicals. The plan must be specific to your workplace. Here's what to do:

## **Develop a list of workplace chemicals to which your employees could be exposed.**

If a chemical is hazardous and employees could be exposed to it when they are doing their job duties, put it on the list. Update your list when you receive new chemicals. Make sure there is a safety data sheet for each chemical on the list.

## **Ensure that containers of hazardous chemicals have labels.**

Describe how you will make sure that each container at your workplace has a label that identifies the chemical and provides the required information about its hazards.

## **Determine where you will keep safety data sheets.**

Keep safety data sheets where they are readily available to all employees. If you store them in a paper file, identify the location where employees can access them. If you electronically store them, describe how employees will access them, especially in an emergency. Indicate who to contact if one is missing or incomplete.

## **Describe how you will train your employees about the chemical's hazards.**

Include how employees will be trained to protect themselves from hazards and how to read and understand product labels and safety data sheets.

## **Describe how you will inform employees who do nonroutine tasks about the hazardous chemicals they may be exposed to.**

Identify the nonroutine tasks, such as annual maintenance activities or leaks from sealed containers, and determine what employees must do to minimize exposure to these chemical hazards.

## **Describe how you will inform employees about hazardous substances in unlabeled pipes and pipes insulated with asbestos-containing material.**

Focus first on pipes that run through employees' work areas. Also see Division 2/Z, 437-002-0378 Oregon Rules for Pipe Labeling.

## **Describe how you will inform contractors and other employers about the hazardous chemicals their employees may be exposed to at your workplace.**

Include how and where you will make your safety data sheets available, how you will inform them about any precautions necessary for their employees, and the labeling system used in your workplace.

## **Using safety data sheets**

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A safety data sheet contains detailed information about a hazardous chemical's health effects, its physical and chemical characteristics, and the safe practices for using it.

You must have a current safety data sheet for every hazardous product covered by the HCS that your employees use or may be exposed to as part of their work.

You must ensure that safety data sheets are always available to employees in their work areas. Whether you keep safety data sheets in a notebook or on a computer, employees must be able to obtain the information immediately, especially in an emergency. If you electronically keep safety data sheets or access them on the Internet, you must have a backup system in place. If your primary system becomes inoperable, such as from loss of power, network outage, or computer crash, you must still have a way for employees to access the information.

Identify who (a person, a work unit, or a job title) is responsible for managing all the safety data sheets at your workplace. This responsibility should include ensuring that:

- The list of hazardous chemicals in the workplace is current.
- The unique product identifier of each chemical on the list can be easily cross-referenced with the product identifier on its label and with its safety data sheet.
- All hazardous chemical containers received have legible labels and safety data sheets.

## **Responsibilities of suppliers to provide safety data sheets**

Chemical manufacturers and importers must prepare or provide a safety data sheet for each hazardous chemical product they supply.

Wholesale distributors are responsible for ensuring that you have a safety data sheet for each hazardous chemical product they sell to you.

If retail distributors sell hazardous chemicals to employers with a commercial account, they must provide safety data sheets to employers upon request. They must also post a sign or otherwise inform employers that a safety data sheet is available.

If an employer without a commercial account purchases a hazardous chemical from a retail distributor, the retail distributor must provide the employer, upon request, with the name, address, and telephone number of the chemical manufacturer, importer, or distributor where they can obtain a safety data sheet.

### **Uniform formatting required on safety data sheets**

The HCS requires chemical manufacturers, distributors, or importers to provide safety data sheets that provide specific information about the hazards of chemical products. As of June 1, 2015, the HCS requires all safety data sheets to be in a uniform format and include the section numbers, the headings, and associated information under the 16 headings below:

1. Identification includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.
2. Hazard identification includes all hazards regarding the chemical and required label elements.
3. Composition/information on ingredients includes information on chemical ingredients and trade secret claims.
4. First-aid measures include important symptoms or effects (acute or delayed) and required treatment.
5. Firefighting measures list suitable extinguishing techniques, equipment, and chemical hazards from fire.
6. Accidental release measures list emergency procedures, protective equipment, and proper methods of containment and cleanup.
7. Handling and storage lists precautions for safe handling and storage, including incompatibilities.
8. Exposure controls/personal protection lists OSHA's permissible exposure limits (PELs), the American Council of Governmental Industrial Hygienists' threshold limit values (TLVs), appropriate engineering controls, and personal protective equipment (PPE).
9. Physical and chemical properties list the chemical's characteristics.
10. Stability and reactivity lists chemical stability and possibility of hazardous reactions.
11. Toxicological information includes routes of exposure, related symptoms, acute and chronic effects, and numerical measures of toxicity.
12. Ecological information.\*
13. Disposal considerations.\*
14. Transport information.\*

15. Regulatory information.\*

16. Other information includes preparation and revision dates of the safety data sheet.

Mandatory [Appendix D to 1910.1200](#) - Safety Data Sheets provides more details about the specific information under sections 1-11 and 16 that chemical producers must provide. The safety data sheet must clearly indicate that information is not available if no relevant information is found for any given subheading within a section.

\*OSHA will not enforce sections 12 through 15 because this information is regulated by other agencies.

### **What to do with the SDS when you no longer use a hazardous chemical at your workplace**

The HCS only requires you to keep safety data sheets for the chemicals that are present in your facility.

However, another rule – 1910.1020 – requires employers to keep a record of employee exposures to hazardous chemicals for at least 30 years. You can either keep the safety data sheets for these hazardous products that you no longer use or you can keep another record that includes the chemical's identity and where and when it was used in your workplace.

For more information about these recordkeeping requirements, see Division 2/Z, [1910.1020, Access to employee exposure and medical records](#).

# Labeling containers of hazardous chemicals

If you use hazardous chemicals at your workplace, you must ensure that each container has a legible label in English that identifies the chemical and its hazards and is easily cross-referenced with the product's safety data sheet. Do not remove or deface the label.

## Labels on containers shipped to you

As of June 1, 2015, the HCS requires chemical manufacturers and importers to ensure that each hazardous chemical product shipped to you has a GHS-aligned label that includes:

- A product identifier
- A signal word
- A hazard statement
- A pictogram
- Precautionary statements
- The supplier's name, address, and telephone number


The label elements chosen by the chemical producer are based on the hazard classification performed for that chemical product. [Appendix C to 1910.1200](#) provides specific, mandatory guidelines for the allocation of these label elements.

Effective Dec. 1, 2015, distributors may not ship containers unless they have a GHS-aligned label. If you are not sure that a hazardous chemical container is properly labeled, contact the supplier.

For more information, see "Phase-in dates for the new requirements" in the table under HCS and the GHS on page 4.

## CHEMICAL X

**DANGER**



**HAZARD STATEMENTS:**

- Fatal if swallowed.
- Causes severe skin burns and eye damage.

**PRECAUTIONARY STATEMENTS:**

- Wear protective gloves.
- Wear face protection.
- Do not eat drink or smoke when using this product.
- Wash hands thoroughly after use.
- Store in a sealed container.
- **IF ON SKIN:** Rinse immediately with cool water.
- **IF IN EYES:** Rinse thoroughly with water and seek medical attention.
- **IF SWALLOWED:** Do not induce vomiting. Seek medical attention.

**Dispose of contents container in accordance with local regulations.**  
Chemical X Manufacturing, 1234 Over There St., 123-555-5555

**See the SDS for more information.**





## Secondary, workplace containers

With only two permissible alternative methods, the employer must make sure that each container of hazardous chemicals in the workplace is labeled, tagged, or marked with either of the following:

- All the information specified for the labels on shipped containers
- The product identifier and words, pictures, symbols, or a combination that provide at least general information about the hazards of the chemicals.



# Permissible alternative methods to HCS workplace labeling requirements

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## Individual stationary process containers

Instead of putting labels on individual stationary containers used for processing, the employer may use signs, placards, process sheets, batch tickets, operating procedures, or other written materials as long as this alternative method:

- Identifies the specific containers it applies to.
- Provides all the information required to be on a label.

The employer must ensure this alternative written material is readily accessible to the employees in their work area throughout each work shift.

## Portable, secondary containers for immediate use

Immediate use means the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and will be used only during the work shift in which it is transferred. You are not required to put a label on a portable, secondary container if it meets the immediate use definition.

Drugs that are dispensed by a pharmacy to a health care provider for direct administration to a patient are also exempted from labeling under this exception.

# Exceptions to the labeling requirements of the HCS

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## Products covered by other labeling regulations

The HCS does not regulate the labeling of products covered by other labeling regulations. These include:

- Pesticides as defined in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) when subject to the labeling requirements of that act and labeling regulations issued under that act by the Environmental Protection Agency.
- Chemical substances or mixtures as such terms are defined in the Toxic Substances Control Act (TSCA) when subject to the labeling requirements of that act and labeling regulations issued under that act by the Environmental Protection Agency.
- Food, food additives, color additives, drugs, cosmetics, or medical or veterinary devices or products, including materials such as flavors and fragrances as ingredients in such products, as such terms are defined in the Federal Food, Drug, and Cosmetic Act or the Virus-Serum-Toxin Act of 1913 and regulations issued under those acts when they are subject to the labeling requirements under those acts by either the Food and Drug Administration or the Department of Agriculture.
- Distilled spirits, wine, or malt beverage intended for nonindustrial use, as such terms are defined in the Federal Alcohol Administration Act when subject to the labeling requirements of that act and labeling regulations issued under that act by the Bureau of Alcohol, Tobacco, Firearms, and Explosives.
- Consumer products or hazardous substances as those terms are defined in the Consumer Product Safety Act and Federal Hazardous Substances Act, respectively, when subject to a consumer product safety standard or labeling requirement of those acts, or regulations issued under those acts by the Consumer Product Safety Commission.
- Agricultural or vegetable seed treated with pesticides and labeled in accordance with the Federal Seed Act and the labeling regulations issued under that act by the Department of Agriculture.

The other requirements of the HCS still apply to any of these hazardous products if they are present in the workplace and used as part of an employee's job duties at an occupational level of exposure with a frequency and duration of exposure that is greater than that of a consumer.

# Labeling pipes: hazardous substances and asbestos-containing material

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If your workplace has pipes that contain hazardous substances or that are insulated with asbestos-containing material, you must either place warning labels on the pipes to identify the hazards or use other methods, such as process sheets or written operating procedures, to warn employees.

## Labeling pipes containing hazardous substances

Examples of pipes that contain hazardous substances are pipes that contain physical hazards, such as combustible liquids or compressed gas and pipes that contain health hazards, such as toxic, carcinogenic, or corrosive chemicals.

The labeling method you use must clearly identify the location of the pipes and the substances in the pipes. This information must be conveyed by the labels or made readily available to employees in their work areas.

- If you use warning labels, apply them at the beginning and the end of continuous pipe runs.
- If a pipe is above or below the normal line of vision, apply the label above or below the horizontal center line of the pipe so that employees can see it.

## Labeling pipes insulated with asbestos-containing material

You can use warning labels on the pipes or you can use other methods, such as process sheets or written operating procedures, to identify asbestos-containing pipes. Your warning method must specify the location of the pipes and use these words:

**DANGER. CONTAINS ASBESTOS FIBERS.  
MAY CAUSE CANCER.**

**CAUSES DAMAGE TO LUNGS.  
DO NOT BREATHE DUST. AVOID CREATING DUST.**

- If you use warning labels, apply them at least every 75 feet on continuous pipe runs.
- If a pipe is above or below the normal line of vision, apply the label below or above the horizontal center line of the pipe so that employees can see it.
- The rules covering these requirements for general industry are in Division 2/ Z, 437-002-0378, [Oregon rules for pipe labeling](#).

# Training employees about hazard communication

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## Required HCS information and training

If you have employees who may be exposed to hazardous chemicals, you must inform and train them.

Inform employees about:

- The requirements of 1910.1200.
- Any operations in their work areas where hazardous chemicals are present.
- The location and availability of the written hazard communication program, including the list of hazardous chemicals and safety data sheets.

Provide training when they are first hired and whenever a new chemical hazard is introduced into their work area. Required training must cover:

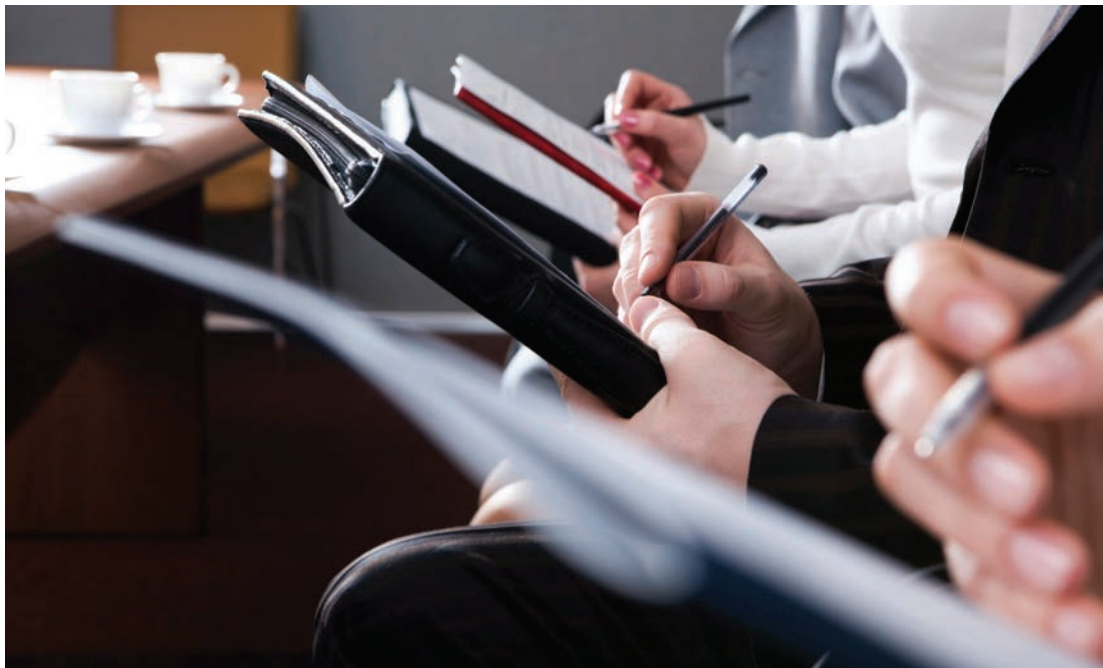
- The methods you use to detect the presence or release of a hazardous chemical in employees' work areas, such as exposure monitoring and the appearance or odor of the chemicals.
- The physical and health hazards of the chemicals in their work areas, including simple asphyxiation, combustible dust, pyrophoric gases, and hazards not otherwise classified.
- The measures employees can take to protect themselves from these hazards, including those you have implemented, such as appropriate work practices, emergency procedures, and required personal protective equipment.
- The details of your hazard communication program, including:
  - An explanation of the labels on shipped containers you receive.
  - The labeling system you use on in-house containers and on pipes in employees' work areas that contain hazardous substances.
  - The information presented on safety data sheets, including the order of the information.
  - How employees can obtain and use the information on safety data sheets.

**NOTE: Employers have until June 1, 2016 to update their alternative workplace labeling and hazard communication program and to provide additional employee training for newly identified physical or health hazards.**

## Who can train employees?

Choose a person who understands the required training topics and who has the skills to conduct the training in a way that employees can understand.





## Trade secrets

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- [Appendix E to 1910.1200](#) – Definition of Trade Secret sets out the criteria to be used in evaluating trade secret claims.

Chemical manufacturers, importers, and employers may withhold specific chemical information, including the chemical name, other specific identification of a hazardous chemical, or the exact percentage of the substance in a mixture from the safety data sheet, provided that:

- The claim that the information is a trade secret can be supported.
- Information contained in the safety data sheet about the properties and effects of the hazardous chemical is disclosed.
- The safety data sheet indicates that the chemical's identity or percentage of composition is being withheld as a trade secret.
- The chemical's identity and percentage is made available to health professionals, employees, and designated representatives in accordance with the requirements of 1910.1200(i).

# A sample written hazard communication plan

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The management of [this workplace] is committed to preventing accidents and ensuring the safety and health of our employees. We will comply with all applicable federal and state health and safety rules and provide a safe, healthful environment for all our employees. This written hazard communication plan is available at the following location for review by all employees: [Location name].

## Identifying hazardous chemicals

A list is attached to this plan that identifies all hazardous chemicals with a potential for employee exposure at this workplace. [Attach list]. Detailed information about the physical, health, and other hazards of each chemical is included in a safety data sheet (SDS) and the product identifier for each chemical on the list matches and can be easily cross-referenced with the product identifier on its label and on its safety data sheet.

## Identifying containers of hazardous chemicals

All hazardous chemical containers used at this workplace will be marked with one of the following:

- The original manufacturer's label that includes a product identifier; an appropriate signal word; hazard statements; pictograms; precautionary statements; and the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.
- Another label with the appropriate label elements just described.
- Workplace labeling that includes the product identifier and words, pictures, symbols, or a combination that provides at least general information regarding the hazards of the chemicals.

[Name of person or job title] will ensure that all containers are appropriately labeled. No container will be released for use until this information is verified. Workplace labels must be legible and in English. Information in other languages is available at: [Identify the location if they are stored in a paper file. Describe how to access this information.]

## Keeping safety data sheets *(previously known as material safety data sheets)*

Safety data sheets are readily available to all employees during their work shifts. Employees can review safety data sheets for all hazardous chemicals used at this workplace. [Identify the file location if they are stored in a paper file. Describe how to access them if they are stored electronically].

The safety data sheets are updated and managed by [name of person or job title responsible for managing the safety data sheets]. If a safety data sheet is not immediately

available for a hazardous chemical, employees can obtain the required information by calling [name of person or job title responsible for providing information in an emergency].

### **Training employees about chemical hazards**

Before they start their jobs or are exposed to new hazardous chemicals, employees must attend a hazard communication training that covers the following topics:

- An overview of the requirements in Oregon OSHA's hazard communication rules.
- Hazardous chemicals present in their workplace.
- Any operations in their work area where hazardous chemicals are used.
- The location of the written hazard communication plan and where it may be reviewed.
- How to understand and use the information on labels and in safety data sheets.
- Physical and health hazards of the chemicals in their work areas.
- Methods used to detect the presence or release of hazardous chemicals in the work area.
- Steps we have taken to prevent or reduce exposure to these chemicals.
- How employees can protect themselves from exposure to these hazardous chemicals through use of engineering controls/work practices and personal protective equipment.
- An explanation of any special labeling present in the workplace.
- Emergency procedures to follow if an employee is exposed to these chemicals.

[Name of person or job title responsible for managing the training program] is responsible to ensure that employees receive this training. After attending the training, employees will sign a form verifying that they understand the above topics and how the topics are related to our hazard communication plan.

### **Informing employees who do special tasks**

Before employees perform special nonroutine tasks that may expose them to hazardous chemicals, their supervisors will inform them about the chemical's hazards. Supervisors must inform employees how to control exposure and what to do in an emergency. The employer will evaluate the hazards of these tasks and provide appropriate controls including personal protective equipment and any additional training as required.

Examples of special tasks that may expose employees to hazardous chemicals include the following: [include examples of special nonroutine tasks].



## **Informing employees about hazardous chemicals in pipes**

This workplace follows the labeling requirements in OAR 437-002-0378 concerning the labeling of pipes. Before working in areas where hazardous chemicals are transferred through unlabeled pipes or where pipes are insulated with asbestos-containing material, employees will contact [name of person or job title] for the following information:

- Identity of chemicals in the pipes.
- Physical or health hazards presented by the chemicals.
- Safe work practices necessary to prevent exposure.

## **Informing contractors and other employers about our hazardous chemicals**

If employees of other employers may be exposed to hazardous chemicals at our workplace (for example, employees of a construction contractor working on-site) It is the responsibility of [name of person or job title] to provide contractors and their employees with the following information:

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

[Name of person or job title] will also obtain a safety data sheet for any hazardous chemical a contractor brings into the workplace.

**NOTE: Oregon OSHA has additional [hazard communication-related forms](#) available on its website.**

## Appendix A — Explanation of Pictograms

### Health Hazard



- **Carcinogens** – A chemical substance or mixture that can cause cancer.
- **Respiratory Sensitizer** – A chemical that if inhaled may lead to an allergic-type reaction of the lungs (respiratory system) if inhaled again.
- **Reproductive Toxicity** – Harmful effects to sexual function and fertility in adult males and females, or on development of the offspring.
- **Target Organ Toxicity (Single exposure)** – The significant health effects that can impair the function of a specific target organ (for example, the eyes or the kidneys) caused by a single exposure to a chemical. Toxic effects may be reversible or irreversible, immediate or delayed.
- **Target Organ Toxicity (Repeated exposure)** – The significant health effects that can impair function of a specific target organ (for example, the eyes or the kidneys) caused by repeated exposure to a substance or mixture. Toxic effects may be reversible or irreversible, immediate or delayed.
- **Mutagenicity** – Chemical exposure causing permanent changes in the amount or structure of the genetic material in a cell.
- **Aspiration Toxicity** – The harmful effect of a liquid or solid chemical when it enters the oral or nasal cavity directly by being breathed in or indirectly entering the respiratory system as a result of vomiting.

### Flame



- **Flammable Gases** – A gas that forms a flammable mixture with air at ambient temperature and pressure.
- **Flammable Aerosols** – A chemical in a non-refillable container with a gas compressed, liquefied, or dissolved under pressure and fitted with a release device allowing the contents to be ejected as particles in suspension in a gas, or in another form; and meeting flammability test criteria.
- **Self Reactives** – Thermally unstable liquid or solid chemicals likely to undergo decomposition – even without interaction with air. These chemicals that are likely to undergo a stronger exothermic decomposition are classified under explosives.
- **Pyrophoric Liquids** – A liquid chemical that, even in small quantities, is likely to ignite within five minutes after coming into contact with air.
- **Pyrophoric Solids** – A solid chemical that even in small quantities is likely to ignite within five minutes after coming into contact with air.

*Flame – continued on Page 33*

- **Self-Heating** – A solid or liquid chemical (other than a pyrophoric liquid or solid) that, without energy supply, is likely to react with air and generate heat. Differs from a pyrophoric liquid or solid because it will ignite only when in large amounts and after long periods of time (hours or days).
- **Emits Flammable Gas** – Solid or liquid chemicals that, when in contact with water, emit flammable gases or that, by interaction with water, are likely to ignite spontaneously or to give off flammable gases in dangerous quantities.
- **Organic Peroxides** – A carbon-containing compound having two oxygen atoms joined together (-O-O-) called a “peroxy” group. Organic peroxides can be severe fire and explosion hazards.

## Exclamation Mark



- **Irritant (Skin or Eyes)** – Reversible damage to the skin or eyes following exposure to a chemical substance.
- **Dermal Sensitizer** – An allergic-type reaction of skin tissue after repeated exposure to a chemical substance.
- **Acute Toxicity (Harmful)** – Harmful, health effects that occur soon after a single oral or dermal exposure to a chemical substance; or multiple doses given within 24 hours; or an inhalation exposure of four hours.
- **Narcotic Effects** – Depression of the central nervous system, exhibited as sleepiness, reduced alertness, loss of reflexes, lack of coordination, and dizziness caused by chemical exposure. Can also be shown as severe headache or nausea and can lead to irritability, fatigue, and worsen memory, perception, and reaction time.
- **Respiratory Tract Irritants** – Chemical exposure effects, characterized by localized redness, swelling, and fluid build-up that weakens respiratory function with symptoms such as cough, pain, choking, and difficulty breathing.

## Gas Cylinder

- **Gas Under Pressure** – Gases in a container at a pressure of 29 psi (gauge) or more, are liquefied, or are liquefied and refrigerated.



## Corrosion

- **Corrosive (destructive) to skin or eyes** – Irreversible damage to the skin or eyes, including visible, localized death (necrosis) of skin tissue, burns, or serious eye damage following exposure to a chemical substance.
- **Corrosives** – A chemical that will by chemical action materially damage or destroy metals.



## Exploding Bomb



- **Explosives** – A solid or liquid chemical that is capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Pyrotechnic chemicals are included even when they do not evolve gases.
- **Self Reactives** – Thermally unstable liquid or solid chemicals likely to undergo a strongly exothermic decomposition even without participation of oxygen (air). This definition excludes chemicals classified under this section as explosives, organic peroxides, oxidizing liquids, or oxidizing solids.
- **Organic Peroxides** – Any organic (carbon-containing) compound having two oxygen atoms joined together (-O-O-) called a “peroxy” group, where one or both of the hydrogen atoms have been replaced by organic radicals (with an unpaired electron). Organic peroxides are thermally unstable chemicals, which may undergo exothermic self-accelerating decomposition. In addition, they are likely to have one or more of the following properties:
  - ✓ Likely to explode
  - ✓ Burn intensely
  - ✓ Be sensitive to impact or friction
  - ✓ React dangerously with other substances

## Flame Over Circle

- **Oxidizer** – A substance that readily yields oxygen to cause or intensify the combustion of organic material. Includes gases, liquids, and solids.



## Skull and Crossbones

- **Acute Toxicity (Severe or Fatal)** – Severe, harmful health effects (that may include death) occurring soon after a single oral, dermal, or inhalation exposure to a chemical substance, or multiple exposures within a 24-hour period.



# Oregon OSHA Services

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Oregon OSHA offers a wide variety of safety and health services to employers and employees:

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## Enforcement

▶ **503-378-3272; 800-922-2689; [enforce.web@oregon.gov](mailto:enforce.web@oregon.gov)**

- Offers pre-job conferences for mobile employers in industries such as logging and construction.
  - Inspects places of employment for occupational safety and health hazards and investigates workplace complaints and accidents.
  - Provides abatement assistance to employers who have received citations and provides compliance and technical assistance by phone.
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## Consultative Services

▶ **503-378-3272; 800-922-2689; [consult.web@oregon.gov](mailto:consult.web@oregon.gov)**

- Offers no-cost, on-site safety and health assistance to help Oregon employers recognize and correct workplace safety and health problems.
  - Provides consultations in the areas of safety, industrial hygiene, ergonomics, occupational safety and health programs, assistance to new businesses, the Safety and Health Achievement Recognition Program (SHARP), and the Voluntary Protection Program (VPP).
- 

## Standards and Technical Resources

▶ **503-378-3272; 800-922-2689; [tech.web@oregon.gov](mailto:tech.web@oregon.gov)**

- Develops, interprets, and gives technical advice on Oregon OSHA's safety and health rules.
- Publishes safe-practices guides, pamphlets, and other materials for employers and employees.
- Manages the Oregon OSHA Resource Center, which offers safety videos, books, periodicals, and research assistance for employers and employees.

# Oregon OSHA Services (continued)

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## Appeals

▶ **503-947-7426; 800-922-2689; [admin.web@oregon.gov](mailto:admin.web@oregon.gov)**

- Provides the opportunity for employers to hold informal meetings with Oregon OSHA on concerns about workplace safety and health.
  - Discusses Oregon OSHA's requirements and clarifies workplace safety or health violations.
  - Discusses abatement dates and negotiates settlement agreements to resolve disputed citations.
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## Conferences

▶ **503-378-3272; 888-292-5247, Option 1; [oregon.conferences@oregon.gov](mailto:oregon.conferences@oregon.gov)**

- Co-hosts conferences throughout Oregon that enable employees and employers to learn and share ideas with local and nationally recognized safety and health professionals.
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## Public Education

▶ **503-947-7443; 888-292-5247, Option 2; [ed.web@oregon.gov](mailto:ed.web@oregon.gov)**

- Provides workshops and materials covering management of basic safety and health programs, safety committees, accident investigation, technical topics, and job safety analysis.

## Important Links

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[Oregon OSHA](http://www.orsosha.org) ([www.orsosha.org](http://www.orsosha.org)), go to A to Z Topic List and then Hazard Communication.

[GHS](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html) ([www.unece.org/trans/danger/publi/ghs/ghs\\_welcome\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html)) links and information, including the UN's Purple Book.

Federal OSHA's [Hazard Communication](http://www.osha.gov/dsg/hazcom/index.html) ([www.osha.gov/dsg/hazcom/index.html](http://www.osha.gov/dsg/hazcom/index.html)) topic page.

# Need more information? Call your nearest Oregon OSHA office.

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## Salem Central Office

350 Winter St. NE  
Salem, OR 97301-3882  
**Phone:** 503-378-3272  
**Toll-free:** 800-922-2689  
**Fax:** 503-947-7461  
**en Español:** 800-843-8086  
**Website:** [osha.oregon.gov](http://osha.oregon.gov)

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## Bend

Red Oaks Square  
1230 NE Third St., Suite A-115  
Bend, OR 97701-4374  
541-388-6066  
*Consultation:* 541-388-6068

## Eugene

1500 Valley River Drive, Suite 150  
Eugene, OR 97401-4643  
541-686-7562  
*Consultation:* 541-686-7913

## Medford

1840 Barnett Road, Suite D  
Medford, OR 97504-8250  
541-776-6030  
*Consultation:* 541-776-6016

## Pendleton

200 SE Hailey Ave.  
Pendleton, OR 97801-3056  
541-276-9175  
*Consultation:* 541-276-2353

## Portland

Durham Plaza  
16760 SW Upper Boones Ferry Road, Suite  
200  
Tigard, OR 97224-7696  
503-229-5910  
*Consultation:* 503-229-6193

## Salem

1340 Tandem Ave. NE, Suite 160  
Salem, OR 97301  
503-378-3274  
*Consultation:* 503-373-7819

## **Salem Central Office**

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