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Project Work***SAFE*** Guide to the GHS-aligned Hazard Communication Standard

About this Guide

Project Work***SAFE***'s Guide to the GHS-aligned Hazard Communication Standard is reprinted, with permission, from an Oregon OSHA Standards and Technical Resources publication. This quick guide is designed for employers and employees who want to know about the GHS Hazard Communication Standard.

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The Essence of Hazard Communication

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 be hard-pressed 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 Nation's 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 US 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 crossing borders will have consistent information. This will enhance both employer and worker comprehension of the hazards, and will help to ensure appropriate handling and safe use of workplace chemicals.

Effective Completion Date	Requirements	Who
Dec. 1, 2013	Train employees on the new label elements and safety data sheet (SDS) format.	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 workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers

Navigating OSHA's hazard communication rules

HazCom, general industry – 29CFR1910.1200

1910.1200, the Hazard Communication Standard (HCS) 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.

HCS, construction – 29CFR1926.59

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.

What is a hazardous chemical?

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, 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 gasses
- 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 UN's Purple Book:
http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html

Federal OSHA's Hazard Communication topic page.
https://www.osha.gov/dsg/hazcom/index.html

Health Hazard  ▪ Carcinogen ▪ Mutagenicity ▪ Reproductive Toxicity ▪ Respiratory Sensitizer ▪ Target Organ Toxicity ▪ Aspiration Toxicity	**Flame**  ▪ Flammables ▪ Pyrophorics ▪ Self-Heating ▪ Emits Flammable Gas ▪ Self-Reactives ▪ Organic Peroxides	**Exclamation Mark**  ▪ Irritant (skin and eye) ▪ Skin Sensitizer ▪ Acute Toxicity ▪ Narcotic Effects ▪ Respiratory Tract Irritant ▪ Hazardous to Ozone Layer (Non-Mandatory)
Gas Cylinder  ▪ Gases Under Pressure	**Corrosion**  ▪ Skin Corrosion/Burns ▪ Eye Damage ▪ Corrosive to Metals	**Exploding Bomb**  ▪ Explosives ▪ Self-Reactives ▪ Organic Peroxides
Flame Over Circle  ▪ Oxidizers	**Environment** **(Non-Mandatory)**  ▪ Aquatic Toxicity	**Skull and Crossbones**  ▪ Acute Toxicity (Fatal or Toxic)

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

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

HCS DOES 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 only handle chemicals in unopened, sealed containers?

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 during each work shift to your employees 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 under: Using safety data sheets on page 18.

What about hazardous chemicals in laboratories?

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
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; and
- 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?

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 SDS for each product. An SDS includes detailed information about the product's hazards. Manufacturers and importers must provide an SDS 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 an SDS that classifies the chemical and provides specific information about its hazards.

4. The employer must prepare a written hazard communication plan that:
    - 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 SDS.
    - Describes how that particular workplace will use the plan, the SDSs, 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 or Updating Existing Plan/Program

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 an employee 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 store them electronically, 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 non-routine tasks about the hazardous chemicals they may be exposed to.
Identify the non-routine 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.

Label all pipes in the work area ensuring that you do not have any unlabeled pipes.

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

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 keep safety data sheets electronically 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 SDSs that provide specific information about the hazards of chemical products. **As of June 1, 2015**, the HCS requires all SDSs 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. Fire-fighting 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 ACGIH's 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 SDS.

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 SDS 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 record-keeping requirements, see 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 SDS. Don't 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

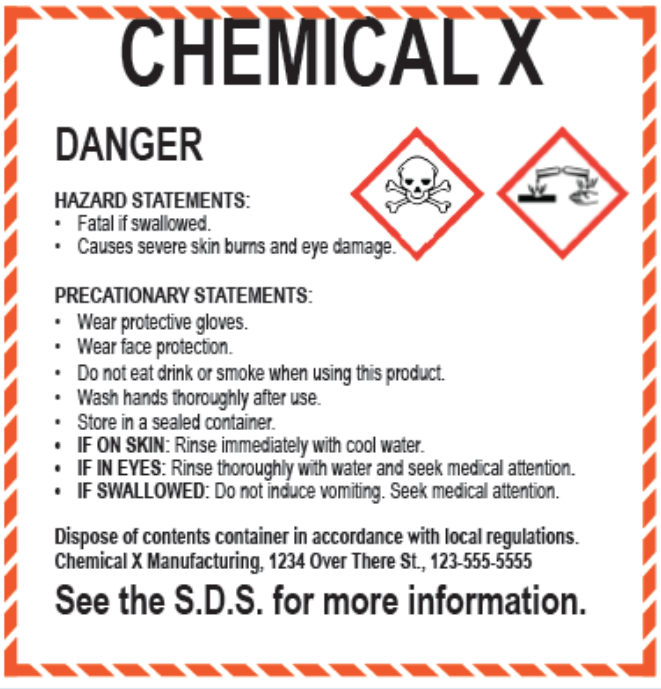
The label elements chosen by the chemical producer are based on the hazard classification performed for that chemical product. Appendix C to 1910.1200 provides specific, mandatory guidelines for the allocation of these label elements.

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

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:

- All the information specified for the labels on shipped containers, or

- 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

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 **only be used 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 which 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

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 like 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

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 at 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 centerline 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 centerline of the pipe so that employees can see it.
- **1910.1001(j)(4)(iv)** At the entrance to mechanical rooms/areas in which employees reasonably can be expected to enter and which contain ACM and/or PACM, the building owner shall post signs which identify the material which is present, its location, and appropriate work practices which, if followed, will ensure that ACM and/or PACM will not be disturbed. The employer shall ensure, to the extent feasible, that employees who come in contact with these signs can comprehend them. Means to ensure employee comprehension may include the use of foreign languages, pictographs, graphics, and awareness training.
- **1910.1001(j)(5)** - Warning labels—**1910.1001(j)(5)(ii)** Label specifications. In addition to the requirements of paragraph (j)(1), the employer shall ensure that labels of bags or containers of protective clothing and equipment, scrap, waste, and debris containing asbestos fibers include the following information:

  DANGER
  CONTAINS ASBESTOS FIBERS
  MAY CAUSE CANCER
  CAUSES DAMAGE TO LUNGS
  DO NOT BREATHE DUST
  AVOID CREATING DUST

Training employees about hazard communication

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 gasses, 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: Although employers have **until Dec. 1, 2013 to train employees on the new label elements and SDS format**, they should provide the training sooner if the new labels and SDSs come into the workplace. Also, 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

- 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).

GHS sample written hazard communication plan

Revised from Oregon OSHA's Guide to the GHS-aligned Hazard Communication Standard OR-OSHA Publication # 440-4960 (4/13)

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 contact info] 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 and contact info]*.

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 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
- Meaning of pictograms, signal words, precautionary statements, and SDS format
- 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 non-routine 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 non-routine tasks at your facility].*

Informing employees about hazardous chemicals in 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 and contact info]* 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 employer(s) 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
- 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.

HAZARD COMMUNICATION STANDARD PICTOGRAMS

Health Hazard

Carcinogen
Mutagenicity
Reproductive Toxicity
Respiratory Sensitizer
Target Organ Toxicity
Aspiration Toxicity

Flame

Flammables
Pyrophories
Self-Heating
Emits Flammable Gas
Self-Reactives
Organic Peroxides

Exclamation Mark

Irritant (skin & eye)
Skin Sensitizer
Acute Toxicity (harmful)
Narcotic Effects
Respiratory Tract Irritant
Hazardous to Ozone
Layer (Non-Mandatory)

Gas Cylinder

Gases Under Pressure

Corrosion

Skin Corrosion
Burns
Eye Damage
Corrosive to Metals

Exploding Bomb

Explosives
Self-Reactives
Organic Peroxides

Flame over Circle

Oxidizers

Environment
(Non-Mandatory)

Aquatic Toxicity

Skull & Crossbones

Acute Toxicity
(Fatal or Toxic)

Acknowledgements and Contact Information

Project Work***SAFE***

Business Assistance

1-888-SAFE-YES

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Vermont Small Business Development Center
ADVISING AND TRAINING

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