Hazard Communication OSHA Standard

In 1983, the Occupational Safety and Health Administration (OSHA) established the Hazard Communication Standard (HCS), 29 Code of Federal Regulations (CFR) 1910.1200, to create uniform hazard communication requirements in all states and jurisdictions to give employees the “right to know” when they are working with hazardous materials, and to reduce chemical-related illnesses and injuries. Revised in 2012, the HCS makes information about chemical hazards available and understandable to employees and employers – giving them not just the right to know when chemicals are present, but also the ability to understand the hazards of having chemicals in the workplace.

A key revision of the HCS aligns the U.S. standard with the United Nations’ Globally Harmonized System of Classification and Labelling of Chemicals (GHS). This revision improves the quality and consistency of the classification and labeling of chemicals and to help employees better understand hazards through quick visual notations – preventing illness and injuries and improving global trade conditions for chemical manufacturers. The revision also requires that employers produce safety data sheets (SDSs) in a standard 16-section format and that employers train employees – especially those who may not be able to read – to understand and recognize the new label elements, pictograms, and SDS format.

Employers, chemical manufacturers, importers, and distributors are all responsible for disseminating information about chemical and physical hazards and protective measures under the HCS.

Recommendations for Employers

OSHA recommends that employers take these steps to implement an effective hazard communication program in the workplace.


- Assign staff to coordinate and run the hazard communication program. This includes designating the staff responsible for training.

- Train all employees, in a manner and language they understand, about hazardous chemicals they might encounter in their immediate work areas before an initial assignment and when a new hazard is introduced. Employers must retain training records for each employee.

Employees must receive training in

- detecting the presence or release of a hazardous chemical in the work area;

- physical and health hazards of the chemicals in the work area;

- measures employees can take to protect themselves from these hazards, including specific procedures for avoiding exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment;

- details of the employer's hazard communication program, including an explanation of the labeling system and the SDS; and

- how employees can find and use chemical hazard information.

Employees must be informed of

- any operations in their work areas where hazardous chemicals are present; and

- the location and availability of the written hazard communication program, including required lists of hazardous chemicals and SDSs.

- Label all hazardous chemical containers properly. Employers must ensure that all containers are labeled with at least the product identifier and general information about the chemical’s hazards. Employers must relabel items if labels are removed or defaced. Employers should assign one person responsibility for ensuring that all hazardous chemical containers are properly labeled.

While employers may use various labeling methods, they must include all required information in the label. Employees must have access to complete information about a chemical’s hazards. Labels must be legible and prominently displayed. Employers may present hazard information in languages their employees speak, as long as the information is also presented in English.
• Exceptions to the container-labeling requirement for employers:
  - Employers are not required to label portable containers into which hazardous chemicals are transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer.
  - Pipes or piping systems, engines, fuel tanks, or other operating systems in a vehicle are not considered containers, but employers must inform employees of hazards associated with chemicals contained in unlabeled pipes in their work areas.
  - The employer may use signs, placards, process sheets, batch tickets, operating procedures, or other written materials instead of affixing labels to individual stationary process containers (such as degreaser baths and reactor vessels), as long as the alternative method identifies the containers to which it is applicable and conveys the information required by paragraph (f)(6) of the HCS on a label.
  - Any chemical substance or mixture subject to the labeling requirements and regulations of the Environmental Protection Agency Toxic Substances Control Act.
• Obtain and make available to employees an SDS for each hazardous chemical used at the facility. While both labels and SDSs must accompany hazardous chemicals, SDSs are a more complete source of information about a chemical's hazards. SDSs must contain details about a chemical's hazards in a standard 16-section format.

Sections 1-8 of the SDS contain
- identification,
- hazard(s),
- composition,
- first-aid measures,
- fire-fighting measures,
- accidental release measures,
- handling and storage, and
- exposure controls/personal protection.
Sections 9-11 and 16 of the SDS contain
- physical and chemical properties,
- stability and reactivity information,
- toxicological information, and
- other information, including date of preparation or last revision of the SDS.

The SDS must also contain sections 12-15 to align with the GHS, but OSHA does not enforce these sections, which are handled by other agencies.

If an employer does not receive an SDS from a supplier, the employer must request one. Employers must also give employees access to the SDSs in their work areas and during their shifts in a physical binder or electronic format.

If employers provide the SDSs electronically, employers must train employees how to get access to the SDSs electronically, must back up the electronic system where the SDSs are kept, and must make hard copies of the SDSs accessible to employees and medical personnel. Employers should assign one person to maintain and update SDSs.

• Establish a written hazard communication program. The program must
  - specify how the employer will comply with labeling requirements for chemical containers in the workplace and chemical containers shipped to other workplaces;
  - provide SDSs and other warnings to employees and downstream employers; and
  - train and inform employees about chemical hazards and protective measures.

The written program must list all hazards, including chemicals and raw materials, in each work area. OSHA recommends using the product identifier (the same name that appears on the hazardous chemical's label and SDS) to make it easier for employers to track the status of SDSs and labels of a particular hazardous chemical.

Employers must update their programs to account for any new chemicals or hazards in the workplace so they are always relevant for employees.

Manufacturer, Importer, and Distributor Responsibilities

Containers shipped to employers by chemical manufacturers, importers, and distributors must be labeled to show

• a product identifier – how the product is identified (for example, chemical name, code number, or batch number). The manufacturer, importer, or distributor can decide on the appropriate product identifier, but the same identifier must appear on the label and in section 1 of the SDS.
• **a signal word** – used to alert the reader of a potential hazard on the label and to indicate the relative severity of the hazard; only two signal words are used (“danger” or “warning”), and a label must contain only one of the two words, no matter how many hazards a chemical may have. “Danger” is used for more severe hazards within a class, and “warning” is for less severe hazards.

• **pictograms** – graphic symbols used to communicate information about a chemical’s hazards; they consist of a red square frame, set at a point, with a black hazard symbol on a white background; they must be wide enough to be visible. *Note: While the GHS uses a total of nine pictograms, as depicted in the figure in this fact sheet, OSHA enforces only eight. The environmental pictogram is not required. The eight pictograms required by OSHA do not replace the diamond-shaped U.S. Department of Transportation labels required for transport of chemicals.*

• **hazard statements** – describe the nature, and in some cases, the degree of a chemical hazard. Example: “Causes damage to kidneys through prolonged or repeated exposure when absorbed through the skin.”

• **precautionary statements** – recommended measures for preventing or minimizing adverse effects resulting from exposure to the hazardous chemical or from improper storage or handling of it. OSHA allows flexibility for combining, ordering by precedence, or eliminating inappropriate statements. Example: “Keep away from heat, sparks, and open flames.” “Store in a well-ventilated place,” and “Keep cool” may be combined to read: “Keep away from heat, sparks, and open flames and store in a cool, well-ventilated place.”

• **contact information** – name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

The HCS mandates that chemical manufacturers, importers, and distributors that become newly aware of significant information about a chemical’s hazards must revise the label within six months.

Chemical manufacturers, importers, and distributors must also provide downstream users with an SDS for each chemical they produce or import. The SDS must be provided at the time of initial product shipment. If the chemical manufacturer, importer, or employer preparing the SDS is aware of significant information about a chemical’s hazards or ways to protect against them, the new information must be added to the SDS within three months. Each SDS must be in English, though it may also be in other languages. Information must be provided in the standard 16-section format.

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**Review Questions**

1. Employees must be trained in understanding safety data sheets.
   - a. True
   - b. False

2. All employees should participate in hazard communication training.
   - a. True
   - b. False

3. Proper labeling
   - a. Must be in English or another language if needed
   - b. Must identify the chemical
   - c. Must contain a hazard warning
   - d. Must contain the name and address of the responsible party
   - e. All of the above

4. Employees should be able to find safety data sheets
   - a. Locked in the safety officer’s desk
   - b. In their work areas
   - c. Kept by the chief financial officer

**Answers**

1. True
2. True
3. e. All of the above
4. b. In their work areas

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