

HAZARD COMMUNICATION & GLOBAL HARMONIZATION SYSTEM



What is Hazard Communication?

In 1983 the Occupational Safety and Health Administration (OSHA) developed the Hazard Communication Standard (HCS), 29 CFR 1910.1200..

The HazCom standard is often called the “Right-to-Know” law or HazCom

What is Hazard Communication?

The HazCom standard is based on a simple idea - that you, as an employee, have both a right and a need to know:

- What chemicals you are exposed to,
- The hazards of working with those chemicals, and
- What steps you can take to protect yourself and those you work with.

What is Hazard Communication?

Most chemicals used in the workplace have some hazard potential and so are covered by the rule.

- To “use” a chemical means to package, handle, react, or transfer it.

What is Hazard Communication?

All employers with hazardous chemicals in their workplaces must:

- Prepare and implement a written hazards communication program.
- Ensure that all containers are labeled.
- Provide employee access to SDSs.
- Conduct an effective training program for all potentially exposed employees.

Why Is a Standard Needed?

The HCS establishes uniform requirements to make sure that hazard information is transmitted to affected employers and exposed employees.

The areas covered by the HCS include:

- Hazard classification.
- A written hazard communication program.
- Labels and labeling
- Safety data sheets (SDSs).
- Employee information and training

Why Is a Standard Needed?

OSHA believes that when employees understand the hazards of the chemicals that they work with, they will be more likely to take the steps necessary to protect themselves and their co-workers from those hazards.

- OSHA has said that the revised HazCom standard now gives employees not only the ‘right-to-know’ but also the “right-to-understand.”

Why Is a Standard Needed?

As a result of “harmonizing” the HCS with the Globally Harmonized System (GHS) you will see changes in:

- How chemical hazards are “classified.”
- The look and content of the container.
- The format and content of the Safety Data Sheets (SDSs)
- HazCom information and training required for workers on the new labels elements and safety data sheets format to facilitate recognition and understanding.

What Is GHS

In 2003, the United Nations (UN) adopted the Globally Harmonized System of Classification and Labeling of Chemicals, or GHS for short

- OSHA believes that revising the HCS to include the GHS will result in the safer handling of workplace chemicals and prevent over 500 workplace injuries and illnesses and 43 fatalities annually.

What Is GHS

The GHS includes criteria for the classification of health, physical and environmental Hazards, as well as specifying what information should be included on labels of hazardous chemicals as well as safety data sheets.

What Is GHS

Once fully implemented the HCS will:

- Improve hazard information in the workplace;
- Enhance worker understanding of hazard, especially for low and limited-literacy workers,
- Result in safer handling and use of chemicals; and
- Provide workers with quicker and more efficient access to information on the safety data sheets.

What Is GHS

The GHS revisions to the HCS standard for labeling and safety data sheets enable employees exposed to workplace chemicals to more quickly obtain and to more easily understand information about the hazards associated with those chemicals.

Who Is Covered by the Standard?

OSHA'S HCS applies to general industry and construction employment and covers employers, and employees exposed to chemical hazards.

Who Is Covered by the Standard?

The HCS applies to any chemical in the workplace where employees can be exposed to under normal conditions of use or in a **foreseeable emergency**.

- “Foreseeable emergency” means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.

Who Is Covered by the Standard?

Under OSHA's HazCom Standard:

- Chemical manufacturers and importers must classify the hazards of the chemicals which they produce or import, and convey the hazard information to their downstream customers.
- Distributors are required to transmit chemical safety information to employers.
- Employers are required to provide information to their employees about the hazardous chemicals to which they are exposed.

Who Is Covered by the Standard?

Limited Provisions of the HCS

- In laboratories and workplaces where the chemicals are only handled in sealed containers, employers do not have to have written HazCom programs or a chemical inventory.
- They need only keep the labels on the containers that are received, keep the SDSs and make them available to employees, and train employees.
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Who Is Covered by the Standard?

A “Right-To-Know”

- As a worker, you need to know about the hazards of the chemicals you work with and what protective measures are available to prevent adverse effects from occurring.
- OSHA incorporated portions of the GHS into the revised HCS so that container labeling, SDS format and content, and chemical hazard determination are standardized and will look the same from workplace to workplace.

What Makes A Chemical Hazardous?

OSHA's definition of a "hazardous chemical" is any chemical which is classified as:

- A physical or health hazard,
- Simple asphyxiant,
- Combustible dust,
- Pyrophoric gas,
- Or a hazard not otherwise classified.

In other words, any chemical that can hurt you!

What Makes A Chemical Hazardous?

What Is Classification?

- Chemical manufacturers and importers are required to evaluate the hazards of the chemicals they provide or import and then ‘classify’ the chemicals using the GHS criteria
- Under GHS, classifications refers to identifying the hazard(s) of a chemical or mixture and then assigning it to one or more hazards classes using the defined GHS criteria.

What Makes A Chemical Hazardous?

Each Hazards class can have up to 5 sub-categories. For example, carcinogenicity has two categories:

- Category 1 is for known or presumed carcinogens.
- Category 2 is for suspected human carcinogens

What Makes A Chemical Hazardous?

After using the GHS system to determine a chemical's hazard class and category the information must then be provided on the:

- SDS
- Container label

What Makes A Chemical Hazardous?

No employer is required to classify chemicals unless:

- They choose not to rely on the classification provided by the chemical manufacturer or importer or;
- They are mixing or creating chemicals in the workplace.

What Makes A Chemical Hazardous?

Health Hazards

The HCS defines the following classifications of health hazards, based upon the GHS Classifications:

- Acute Toxicity (any route)
- Skin Corrosion or irritation
- Serious eye damage or irritation
- Respiratory or skin sensitization
- Mutagenicity
- Carcinogenicity
- Reproductive toxin
- Specific target organ toxicity (single or repeated)
- Aspiration hazard

What Makes A Chemical Hazardous?

Health Hazards

Chemicals which are health hazards can cause illness right away (acute) or at a later date (chronic), for example:

- A rash resulting from a one time exposure of the skin to a chemical would be an **acute** health hazard.
- Cancer that only develops much later or is caused by repeated exposures to chemicals known to cause cancer would be a **chronic** exposure

What Makes A Chemical Hazardous?

Physical Hazards

Physical hazards refer to a chemicals physical properties and mean that a material could easily:

- Burn
- Explode or;
- React violently

What Makes A Chemical Hazardous?

Physical Hazards

GHS uses the following classifications for physical hazards:

- Explosive
- Flammable (gas, aerosol, liquid, or solid)
- Oxidizer (liquid, solid, or gas)
- Self-reactive
- Pyrophoric (liquid or solid)
- Self-heating
- Organic peroxide
- Corrosive to metal
- Gas under pressure
- Emits flammable gas in contact with water

What Makes A Chemical Hazardous?

Environmental Hazards

Environmental hazards refer to the chemical's ability to cause harm in the environment. GHS uses the following classifications for environmental hazards:

- Acute aquatic hazards.
- Long-term aquatic hazards
- Hazardous to the Ozone Layer

While the GHS includes environmental classifications, OSHA did not adopt them into the HCS, because the Agency does not have authority over the environmental issues.

What Makes A Chemical Hazardous?

Other Hazardous Chemicals

OSHA has added specific definitions for other hazardous chemicals :

- **Pyrophoric gases:** Labels must use the signal word “danger” and the hazard statement “catches fire spontaneously if exposed to air.”
- **Simple asphyxiants:** Labels must include the signal word “warning” and the hazard statement “may displace oxygen and cause rapid suffocation.”
- **Combustible dust:** Labels must include the signal word “warning” and the hazard statement “may form combustible dust concentrations in the air.”

What Makes A Chemical Hazardous?

Hazardous Not Otherwise Classified

There are chemicals for which there is evidence of adverse physical or health effects, but which do not meet the specified criteria for any of the physical or health hazard classifications.

These chemicals are referred to as a “Hazardous Not Otherwise Classified (HNOC).”

What Makes A Chemical Hazardous?

Hazardous Not Otherwise Classified (HNOC)

Classification as an HNOC does not mean the chemical poses no hazards – only that it:

- does not fit into one of the established GHS hazard classes, or
- that it falls into a hazard category that OSHA has not adopted, such as Acute Toxicity – Category 5.

The SDS must identify the chemical as an HNOC

What Makes A Chemical Hazardous?

What about Biological Substances?

While infectious biological substances are hazardous, they are not regulated by the Hazcom Standard.

What Makes A Chemical Hazardous?

Consumer Product Exemption

Consumer products, as defined in the Consumer Product Safety Act, are exempt from coverage under the Hazcom standard if:

- It is used in the workplace for the purpose intended by the manufacturer or importer, and if
- The use results in a duration or frequency of exposure which is not greater than the range of exposures that could be reasonably experienced by consumers when used for the purpose intended.

What Makes A Chemical Hazardous?

Articles

Articles, as defined in the standard, are also exempt. Articles are manufactured items other than fluid or a particle which:

- Is formed to a specific shape or design during manufacturer, and
- Has end use function(s) dependent ion whole or in part upon its shape or design during use, and

What Makes A Chemical Hazardous?

Articles

Articles, as defined in the standard, are also exempt. Articles are manufactured items other than fluid or a particle which:

- Under normal conditions of use does not release more than very small quantities, minute or trace amounts of a hazardous chemical and does not pose a physical hazard or health risk to employees.

What Makes A Chemical Hazardous?

Articles

Example of an article might be a brick or galvanized pipe.

By themselves, they do not give off any hazardous chemicals, but if you cut the brick or weld the pipe, you create hazards and they would no longer be considered articles.

What Must My Employer Do?

General Responsibility.

The HCS requires chemical hazard information to be prepared and transmitted to all downstream users regarding those chemicals

Both your employer and the chemical manufacturer or importer have the responsibilities to supply you with the information

What Must My Employer Do?

Manufacturers and Supplier

Chemical manufacturers and importers must:

- Evaluate the hazards of the chemicals they produce or import,
- Label the containers, and
- Provide safety data sheets to the employers to whom they ship the chemicals.

What Must My Employer Do?

Manufacturers and Supplier

- Employers do not have to reclassify any of the hazardous chemicals they receive.
- They may rely on information provided by the chemical manufacturer or importer.

What Must My Employer Do?

Employers

The HCS requires your employer to:

- Identify all Hazardous materials in the workplace, including a hazardous chemical inventory.
- Develop a Hazard Communication Program.
- Get an SDS for each hazardous chemical in the workplace.
- Label all hazardous materials containers in the workplace.
- Design and implement an employee protection program.
- Train employees about the standard, and provide information to the employees on how they can protect themselves from hazards of the chemicals.

What Must My Employer Do?

Employers

The HCS requires your employer to: (Cont'd)

- Train employees about the standard, and provide information to the employees on how they can protect themselves from hazards of the chemicals.
- Assure employee access to SDSs and to the company written Hazcom Program.

Employers that “use” hazardous chemicals must have a program to ensure the information is provided to exposed employees.

“Use” means to package, handle, react, or transfer.