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HAZCHEM

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Hazchem Signs & Labels

Overview:

"Hazchem" is an acronym for "hazardous chemicals." The Occupational Health and Safety Administration (OSHA) defines a hazardous chemical as any chemical which can cause a physical or health hazard. Another acronym, "hazmat," stands for "hazardous materials," and is synonymous with hazchem in regulations addressing the hazards of chemicals in the workplace. (HCS 1910.1200.d)

Given the rather broad definition of hazchem, the presence of hazchem in the workplace is widespread. In addition to requiring manufacturers of hazchem to label their products prior to shipment, OSHA also requires that all employers notify workers of the hazard risks hazchem may pose in the workplace through training programs, hazchem labels, and safety data sheets. The regulations detailing these communication standards are found in the Hazard Communication Standard (HCS). They have been dubbed "Right to Know" regulations since employees have the need and right to know which hazchem they are exposed to in the workplace. (1910.1200.f.5-6)

The HCS has recently been revised to adopt the guidelines set forth for hazchem classification and labeling by the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). The GHS is a global initiative with the goal of having one safety standard for the global economy. Full implementation of the revised HCS was to be completed by 6/1/2016. It is important that employers read the standard carefully to understand how it impacts their particular workplace environment. (HCS1910.1200.b.1)

Resources:

OSHA HCS 2012: (Free)	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10099
OSHA Hazard Communication FAQ: (Free)	http://www.osha.gov/dsg/hazcom/index.html
OSHA Guide to GHS: (Free)	http://www.osha.gov/dsg/hazcom/side-by-side.html
NFPA 704: Standard System for Identification of Hazards of Materials: ($$$)	https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=704

Design of Hazchem Signs & Labels:

- *WORKPLACE LABELS & SIGNS:* Though OSHA allows employers to rely on the manufacturer's container labels to designate hazchem in the workplace, these labels are often complex and of such size that it is difficult to quickly assess a hazard risk from a distance. Also, hazchem are often transferred to other containers or tanks for storage in a facility, and those containers are required to be labeled accordingly. For these reasons, employers often choose to label hazchem in their facility with a label that is easily understood by their employees.

- *NFPA BASED FORMAT:* The National Fire Protection Association (NFPA) was a pioneer in developing a hazchem identification system when it introduced the NFPA 704 standard in 1990. Its original purpose

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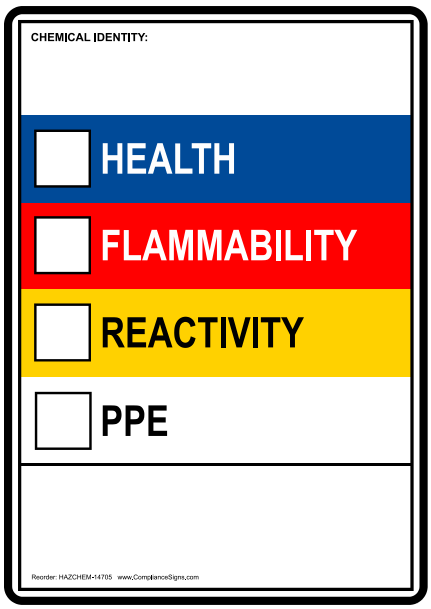
was to identify the presence of hazchem in buildings so that firefighters could quickly identify the risks they would face during an emergency. It uses a diamond symbol with four squares, each with a specific color denoting a hazard category and also containing a number relaying the severity level of the hazard. The hazard severities identified in the standard are only applicable for short term exposure to the chemical. The NFPA "fire diamond" has proven to be a widely accepted standard because it is highly visible and easily understood. Its popularity has led to the evolution of its basic format into the design of product labels and signs used to mark hazchem in the workplace. Another trademarked standard adopting many aspects of the NFPA 704 is the Hazardous Material Identification System (HMIS™), available at JJ Keller. Hazchem signs have a similar function as HMIS™ labels with slightly different design.

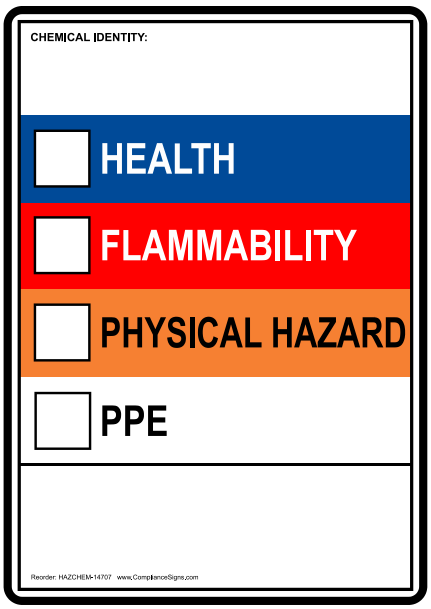
- *BASIC LAYOUT:* In its simplest form, a hazchem labeling template may consist of four color coded hazard categories and five numerical hazard severity levels. The categories may be displayed in the NFPA diamond, a vertical bar format, or a combination of both. A category need not appear on the label if the chemical has not been classified in that category by OSHA.

HAZARD CATEGORIES	
Health	Blue
Flammability	Red
Reactivity	Yellow
PPE	White
Physical Hazard	Orange

HAZARD SEVERITY	
0	Minimal
1	Slight
2	Moderate
3	Serious
4	Severe

- Compliance Signs Hazchem Blanks





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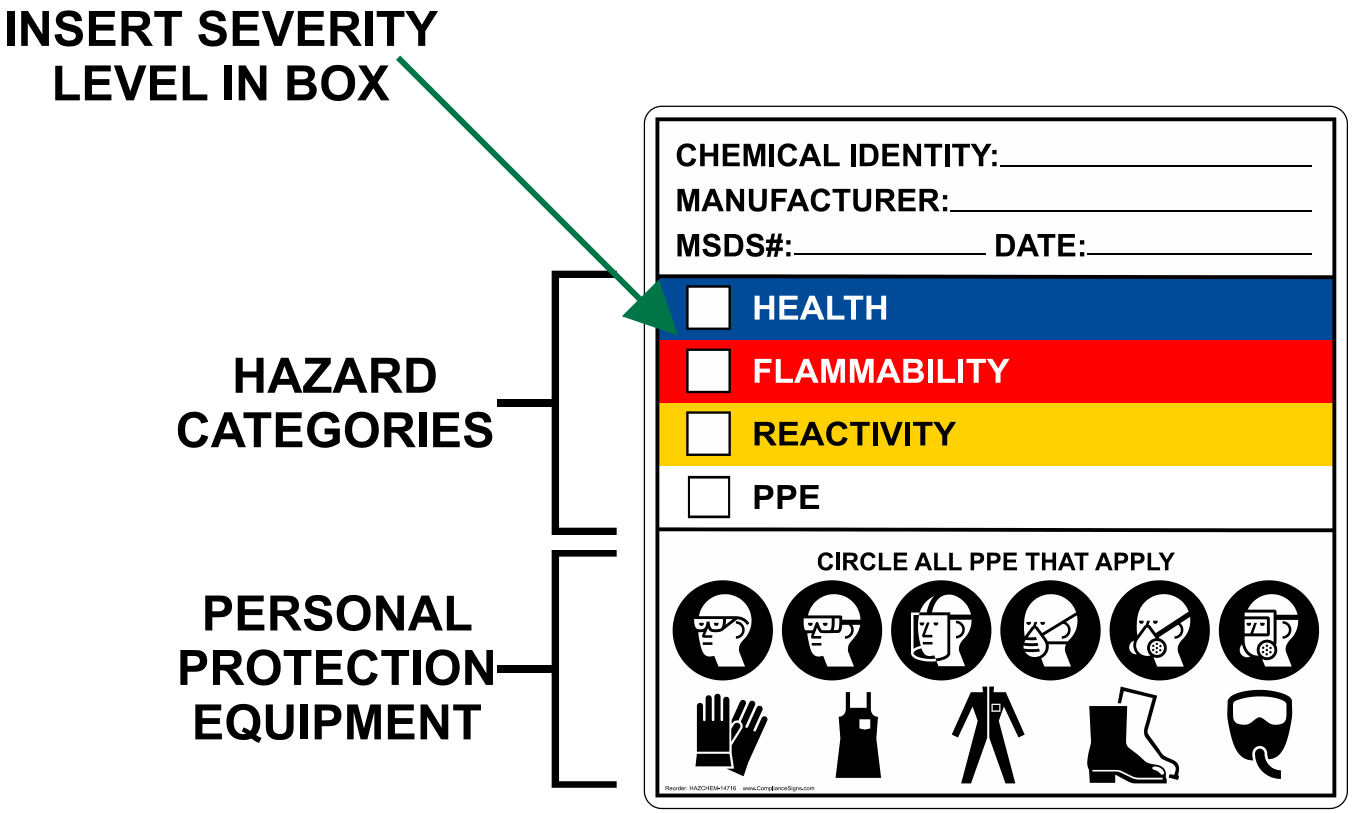
- *CHEMICAL IDENTITY:* The label should display the name of the chemical, manufacturer, and date the SDS was prepared. Though not required by OSHA, a SDS number may also be present. The SDS number may be the manufacturer's number identifying the chemical or one or more CAS numbers. A CAS number is assigned by the Chemical Abstract Service to every known chemical. CAS numbers are useful since some chemicals can be known by multiple names. Multiple CAS numbers may appear if the SDS describes multiple chemicals.
- *ADDITIONAL INFORMATION:* Though the color and numerical designations provide a quick recognition of the inherent hazards of the chemical, it is common to see additional symbols and/or text descriptions providing additional information about a category hazard. Examples such as:
  - HEALTH HAZARDS: "reproductive toxin," "corrosive," "carcinogen."
  - FIRE HAZARD: "must be pre-heated to burn," "will vaporize and ignite at normal temperature."
  - REACTIVITY: "not stable if heated," "may detonate under normal conditions."
  - PHYSICAL HAZARD: "corrosive," "oxidizer," "compressed gas."
  - PPE (Personal protection equipment): Symbols or a check list indicating which PPE should be worn when handling the chemical.



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- *DETERMINING HAZARD RATINGS:* While the system is basically simple in application, the hazard evaluation should be performed by persons who are technically competent and experienced in the interpretation of the hazard criteria as set forth in the HCS standard. If the chemical is not found there, the ratings can often be determined by using the Safety Data Sheet (SDS) supplied by the manufacturer.
- *GHS COMPLIANCE:* Even with OSHA's implementation of GHS standards for the labeling of hazchem in the workplace, there is latitude in how the label is formatted. In addition to the use of the manufacturer's label, an alternative label or sign may be used as long as it conveys the name of the chemical and the appropriate hazard warnings through words, pictures, symbols or a combination thereof, resulting in general information regarding the hazard of the chemical. Alternative labeling systems, such as the NFPA 704 format, may continue to be used as long as they do not display hazard warnings or pictograms that conflict with the GHS. (1910.1200.f.5-6)
- *NOTES:*
    - The design of hazchem labels discussed above pertains only to labels displayed in the workplace. Manufacturers, importers, and shippers of hazchem must comply with different design guidelines as specified in the revised HCS and the Department of Transportation (DOT) Hazardous Material Regulations.
    - During OSHA's implementation of the GHS standard, it is the employer's responsibility to assess if a current hazchem label in use will be in compliance with the new standard. Full compliance for workplace hazchem labeling was to be completed by 6/1/2016.
    - Therefore, it is important that employers carefully read OSHA's revised HCS so that they can determine what steps they need to take in their particular workplace to be in compliance with the regulation.

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https://www.compliancesigns.com/search/go#w=hazchem