

Considerations for Hazardous Chemical Signage

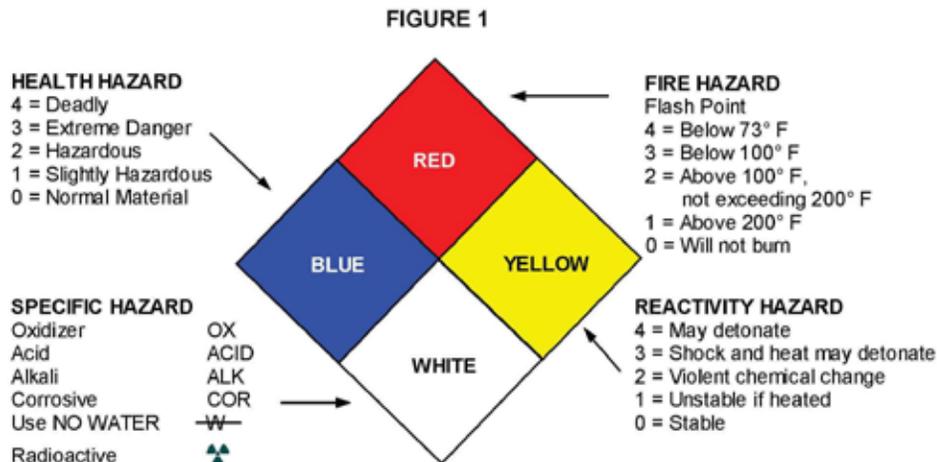
Many facilities operated by nonprofit organizations regularly store and use hazardous chemicals. Most common in facilities operating pools these chemicals can pose a hazard to patrons, staff and emergency response personnel. Right to Know laws for the public and employees provide directive for communicating information about hazardous substances properly to the public and employees. Organizations can assist emergency response personnel by complying with local fire codes, [OSHA](#) hazard communication standards and the standards of the National Fire Protection Association ([NFPA](#)).

Signage Standard

NFPA 704 is a standard for the identification of the hazards of materials during emergency response. The standard defines the diamond shaped placards (fire diamond) used by emergency personnel to quickly and easily identify the risks posed by hazardous materials. The signage helps determine what, if any, special equipment should be used, procedures followed, or precautions taken during the initial stages of an emergency response.

Warning Placards

An NFPA 704 placard is divided into four color-coded quadrants, each identifying a different hazard category: blue for health, red for flammability, yellow for reactivity (instability) and white for special hazard information such as water reactive materials. the placard system also uses a number rating system ranging from “0” to “4” to indicate the relative hazard within each hazard category; 0 representing no or very minimal hazard up to 4 representing the highest degree of hazard.



Placard Numbering

NFPA placard numbering is based on the relative hazards of a chemical, not on absolute values, so ratings can vary slightly between different manufacturers of the same chemical. Numbering information for each chemical is available on the chemical’s Safety Data Sheet ([SDS](#)).

When several chemicals are stored in the same area it is generally acceptable to use Composite Numbering for placards. Pool filter areas may have more than one hazardous chemical present for example. To determine the appropriate numbering for multiple chemicals, the placard will indicate the aggregate hazards by determining the highest rating for each of the placard quadrants (health, flammability, reactivity) based on the chemicals present.

Requirements

NFPA 704 is a voluntary standard. Placards may be required by local and or state codes or ordinances. Fire codes vary and in some instances NFPA 704 may or may not be enforced by local jurisdictions. Placards are generally required when hazardous materials are stored, handled, or used in excess of the following quantities, and whose NFPA ratings exceed 2 for health or 1 for reactivity:

- 500 pounds of a hazardous solid
- 1,000 cubic feet of a compressed inert gas
- 200 cubic feet of any other compressed gas
- 55 gallons of a hazardous liquid

Because codes vary it is generally accepted as good practice to post NFPA 704 compliant placards to communicate hazards for emergency response personnel.

Other Signage

Other warning signage is commonly posted to help keep employees, patrons and emergency response personnel informed of hazards in and around facilities. Codes may require additional warning signage based on jurisdiction. Commonly posted (sometimes required) signage includes:

Electrical Rooms – Doors leading into dedicated electrical control panel rooms should be marked with a sign stating “ELECTRICAL ROOM” or similar wording.

Hazardous Materials Storage Areas – Areas or rooms where hazardous materials are stored should be identified with a sign stating “HAZARDOUS MATERIALS STORAGE AREA – DANGER” or an equivalent.

Compressed Gas Storage – Any area or cabinet used to store compressed gases should be labeled with a sign stating “COMPRESSED GAS.”

No Smoking Signs – A “NO SMOKING” sign should be posted in areas where flammable/combustible materials (liquids, solids, or gases) are stored or used.

Individual Containers - Individual containers of hazardous materials, cartons or packages should be clearly marked or labeled in accordance with applicable federal regulations. Large storage containers of chemicals such as pool chemicals should be clearly and prominently labeled with both the chemical and generic name of the substance.

Other resources (from the [Safe-Wise Consulting Online Library](#)):

[Hazard Communication Sample Label](#)

[OSHA Hazard Communication Standard](#)

[Safe Chemical Handling Practices](#)