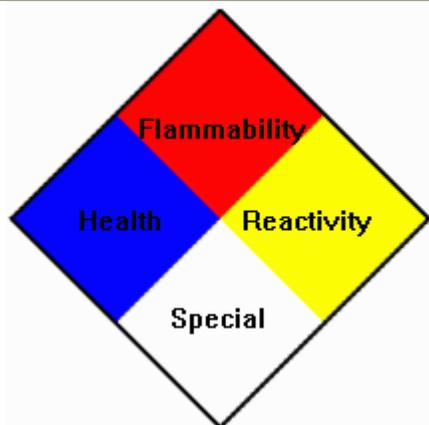




Division of Fire Prevention
Chemical Labeling Procedures

The following are examples of chemical labeling schemes. At a minimum, all chemical containers must include:

1. Name or Identity of the Chemical, and
2. Appropriate Hazard Warnings, (e.g., oxidizer, NFPA 704 or HMIS placards, etc.)



NFPA 704 Hazard Placard

4 = Severe Hazard
3 = Serious Hazard
2 = Moderate Hazard
1 = Slight Hazard
0 = Minimal Hazard

Based on City of Newton Fire Departments
Code Requirements For
Identification of Hazardous Materials

The [NFPA](#) 704 Hazard Placard identifies the following hazards of chemicals:

- [health](#)
- [flammability](#)
- [reactivity](#)
- [special](#)

Each hazard class is ranked to indicate the degree of hazard. These rankings range from "0" designating a "**minimal**" hazard to "4" indicating a "**severe**" hazard.

Similar to the NFPA 704 identification method is the Hazardous Materials Information System (HMIS) developed by the National Paint and Coatings Association. This system uses blue, red, yellow, and white horizontal bars for the health, flammability, reactivity, and special hazard categories. As with the NFPA system, hazards are ranked between 0 (minimal hazard) and 4 (severe hazard). Please be aware there are subtle differences between the two systems in regard as to how hazards are ranked. For example in the health hazard category, the HMIS system tends to be more conservative.

Always reference the manufacturer's label or the MSDS for more detailed hazard information and safe handling procedures.



A 55-gallon drum of phosphoric acid with proper labeling, including the manufacturer's label, and NFPA 704 hazard placard.



Small containers, such as laboratory reagents, also require proper labeling.



Another example of chemical labeling. Note the chemical name and NFPA 704 hazard placard on the side of the vessel.

Code Requirements For Identification of Hazardous Materials

The NFPA 704 system was originally conceived to safeguard the lives of those individuals who may be called upon to remedy a hazardous emergency situation where the location or storage of fire hazards may not be readily apparent. Its objectives are to provide an appropriate signal or alert to the type of hazards present.

The City of Newton Fire Department requires that:

- All tanks, areas, rooms, storage areas and all doors that directly access the tanks, areas, rooms and storage areas that contain a hazardous substance be placarded.
- A placard with no numbers shall be placed on the front of the building to identify the building to the Fire Department as a labeled building.
- Any room or area that has more than one hazardous substance will list the highest number of the most hazardous substance for each section of the placards that are placed on the doors that lead to these areas. Individual hazardous substances must still be labeled.

What is a Hazardous Substance?

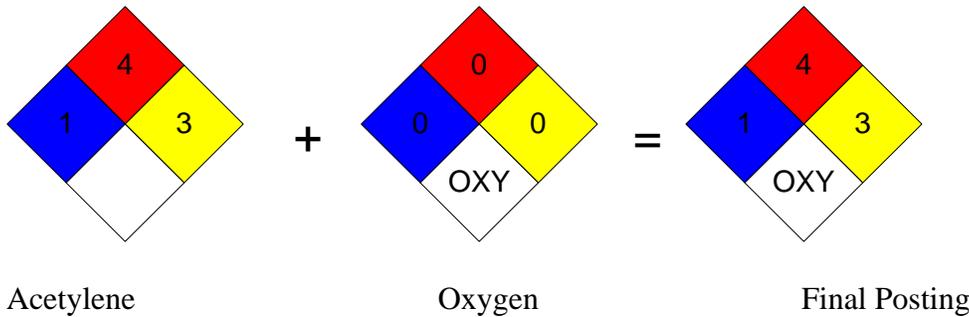
A hazardous substance includes, but is not limited to products that are toxic, corrosive, flammable, irritants, oxidizers, sensitizers, water reactives, or explosives. The key question to ask is, 'Do these materials create an unusual health or safety risk through its use, storage, accidental mixing or possible combustion?' If yes, the material is likely hazardous and you must label the building, room, and/or container.

At What Quantity Must I Use Placards?

When any amount of a substance or combination of substances would cause, or significantly contribute to an increased risk of serious injury, incapacitating illness or increased risk of death.

What Number Do I Use When There Are So Many Different Numbers?

Using your MSDS sheets locate the Health, Flammability, Reactivity and Special hazard rankings. The number or symbol indication in each colored category shall reflect the most severe hazard associated with any hazardous materials at the business or in the area indicated by the posting.



How is the rating displayed?

The system is characterized by the "diamond shape" that is actually a "square-on-point" shape. The hazards are arranged spatially as follows: health at nine o'clock position, flammability at twelve o'clock position, and instability at three o'clock position. In addition to the spatial orientation that can be used to distinguish the hazards, they are also color-coded as follows: blue for health, red for flammability, and yellow for instability.

The six o'clock position on the symbol represents special hazards and has a white background. The special hazards in use are \mathbb{W} , which indicates unusual reactivity with water and is a caution about the use of water in either fire fighting or spill control response, and OXY, which indicates that the material is an oxidizer.