

## NFPA 704 Hazard Identification System

The National Fire Protection Agency (NFPA) has specified a system for identifying the hazards associated with many chemicals. The hazard identification symbol is a color coded array of four numbers or letters arranged in a diamond shape. This symbol appears on the label of many chemicals acquired from commercial vendors.



The **blue diamond**, appearing on the left side of the label, conveys **Health Hazard** information. A number from 0 to 4 appears in the blue diamond indicating the degree of the hazard. The higher the number the higher the hazard, as follows:

- 0-No hazard
- 1-Can cause irritation if not treated
- 2-Can cause injury. Requires prompt treatment
- 3-Can cause serious injury despite medical treatment
- 4-Can cause death or major injury despite medical treatment

The **red diamond**, appearing at the top of the label, conveys **Flammability Hazard** information. Again, the numbers 0 to 4 are used to rate the flammability hazard as follows:

- 0-No hazard
- 1-Ignites after considerable heating
- 2-Ignites if moderately heated
- 3-Can be ignited at all normal temperatures
- 4-Very flammable gases or very volatile flammable liquids

The **yellow diamond**, appearing on the right side of the label, conveys **Reactivity Hazard** information. The numbers 0 to 4 are used to rank reactivity hazards as follows:

- 0-Normally stable. Not reactive with water
- 1-Normally stable. Unstable at high temperatures and pressure. Reacts with water
- 2-Normally unstable but will not detonate
- 3-Can detonate or explode but requires strong initiating force or heating under confinement
- 4-Readily detonates or explodes

The **white diamond**, appearing at the bottom on the label, conveys **Special Hazard** information. This information is conveyed by the use of symbols which represent the special hazard. Two of the common symbols are:

- W denotes the material is water reactive
- OX denotes an oxidizing agent

Some labels use the white diamond to convey personal protective equipment or engineering controls required to work with the material safely. You may see a picture of gloves, safety glasses or a fume hood in the white diamond.

NFPA hazard ratings can be found on the MSDS for a given chemical. Also, this symbol, or a form of this symbol, often appears on the label of commercial chemical products.