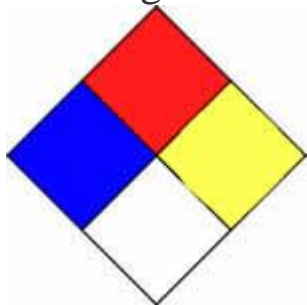




## Meaning of NFPA's Hazard Rating Diamond



The **NFPA hazard rating diamond** was designed by the National Fire Protection Agency. The purpose of the *NFPA hazard rating diamond* is to identify and rank the hazard level of certain materials. The NFPA diamond is made up of four smaller diamonds that each have a different meaning and rating. The four smaller diamonds are red, blue, white and yellow. Each color stands for a different category they are health, flammability, reactivity and special.

### Meaning Of The NFPA's Hazard Diamonds

The *National Fire Protection Agencies hazard diamond* is made up of four small diamond and each one stands for a certain purpose. It is important to know what each diamond means and how they can help you remain safe at work.

The white diamond on the **NFPA hazard diamond** is used for special information.

- Oxy stands for Oxygen.
- G means Compressed Gas.
- LHE is Liquid Helium.
- LN2 means Liquid Nitrogen.
- Ox stands for Oxidizing Agent.
- ACID this means Acid Hazard.
- W means that is it Water Reactive.

The *blue NFPA hazard diamond* is used to signify health. It will help you determine how hazardous the material is to people. There are five ratings that show you how dangerous the material can become.

- 0 stands for minimal danger. There is always some danger involved with chemicals. Zero is used to represent chemicals that are harmful to people when used incorrectly but are often not deadly.
- 1 is used to represent slightly toxic material. They can often cause minor irritation to the skin. Most chemicals with a rating of one are safe when used correctly.
- 2 stands for moderately toxic materials. These materials can cause illness and injuries with long term exposure and can be dangerous if proper medical attention is not given immediately when symptoms appear.
- 3 is used to represent the danger of a chemical that causes serious temporary injuries or illness after short term use.
- 4 means extremely toxic materials. Short term exposure can cause death. May contain carcinogens that can cause illness in humans.



The yellow diamond in the **NCFA hazard diamond** is used to describe reactivity which is also known as stability. It is numbered 0-4. Each number is a different level of stability.

- 0 means minimal reactivity. This material is considered stable and can be mixed with water.
- 1 in the yellow diamond is a generally stable material that can become unstable at high temperatures or under pressure.
- 2 is used to represent a material that normally unstable and can undergo changes but will not usually explode alone. When mixed with water it can become volatile and explode.
- 3 means the chemical has a serious reactivity. It reacts violently with water. Can explode when in a heated confined space.
- 4 this material can violently explode at room temperature.

The final diamond is red. The red diamond is used to describe flammability. Just like the other colors there are five levels of flammability starting at 0.

- 0 is used to represent materials with minimal flammability. These materials will not burn and do not have a flash point.
- 1 has a slight chance of catching fire. It must be preheated before ignition can occur.
- 2 means the material must be moderately heated or exposed to high temperatures for ignition to occur. Can be solids that give off flammable vapors.
- 3 Vapors can be flammable under almost all conditions. Can cause explosive mixtures or burn rapidly when in contact with air.
- 4 is used to represent only the most flammable materials.

You should always read the warnings on the **NFPA hazard rating diamond**.



Read the MSDS for HCl, hydrochloric acid and use that to complete this exercise.

Label me! I am sad and lonely without my numbers. Assign numbers to each of my squares. These numbers should reflect what you find in the HCl MSDS. In the space below the diagram, tell me what each of the numbers you chose mean. Turn me in when you are finished.

