


How to read a Chemical Label

Hazardous materials should always be properly labeled. One common type of label is the US National Fire Protection Association (NFPA) system. Although they look rather simplistic, an NFPA label carries a lot of information for those who understand how to interpret it. For example, NFPA labels are color-coded. Each color on the label represents a different type of hazard.

EXAMPLE	Diborane  Ignites spontaneously in moist air.
Blue = Health hazard	
Red = Fire hazard	
Yellow = Reactivity hazard	
White = Special hazard	

What these colors represent must be remembered first.

On top of the color coding, NFPA also uses a numbering system.

On every NFPA label, there should be a number from zero to four inside the blue, red and yellow areas. The numbers indicate the degree of a particular hazard.

0 = minimal hazard
1 = slight hazard
2 = moderate hazard
3 = serious hazard
4 = severe hazard

The Blue Section - Health Risks

4	The substance is a severe health risk if the substance is not handled safely. Substances carrying a four in the blue section could cause death or irreversible injury.
3	The substance could cause serious temporary or irreversible injury.
2	The substance could cause temporary incapacitation.
1	The substance could cause irritation.
0	There is no health hazard.



The Red Section - Fire Risks

4	A flammable vapor or gas which burns readily.
3	A flammable liquid or solid which can be readily ignited.
2	The substance must be heated for ignition.
1	The substance must be preheated before ignition can occur.
0	There is no fire hazard.

The Yellow Section - Reactivity Hazards

4	The substance is readily capable of detonation or explosive reaction.
3	The substance may detonate when exposed to heat or an ignition source.
2	The substance is readily capable of non-explosive reaction.
1	The substance may become unstable at high temperatures.
0	The substance is stable.

The White Section - Special Hazards

OX	Oxidizer
ACID	Acid
ALK	Alkali
COR	Corrosive
	Use no water
	Radioactive

Regardless of the numbers on the label - even if they carry ones or zeros - be cautious. All chemicals should be treated with the utmost of care.

Users must also have the Material Safety Data Sheets (MSDS) on hand for all chemicals they use. The MSDS contain detail information on:

- Name & trade name of the substance
- Hazardous ingredient(s) it contains
- Physical characteristics of the chemical
- Protective equipment to be used
- What to do in event of a leak or spill
- Any other precautions to be followed

Adapted for print from: <http://www.ab.ust.hk/sepo/tips/ls/ls004.htm>.