

INSTRUCTIONS ON HOW TO FILL OUT THE LABORATORY SAFETY SIGN

ANIMAL ROOM LABORATORY SAFETY SIGN

NOTE: THE SIGN IS A WORD FORM, TO SCROLL FROM EACH FIELD, HIT THE TAB KEY. SOME OF THE FIELDS ARE DROP DOWN MENUS, WHERE YOU CAN CHOOSE CERTAIN NUMBERS OR WORDS, OTHERS ARE WRITABLE FIELDS

PLEASE NOTE THAT THE SIGN MUST BE PRINTED ON A COLOR PRINTER

The laboratory safety sign should be displayed on the exterior door or a wall adjacent to the entry to your laboratory. The purpose of the sign is to alert laboratory workers, visitors, environmental services personnel, and emergency responders of potential hazards in the laboratory. We have chosen to provide the form in easily understood MS Word format.

1. NFPA-National Fire Protection Association Diamonds

Definition

The National Fire Protection Association, **NFPA**, a private non-profit organization, is the leading authoritative source of technical background, data, and consumer advice on fire protection, problems, and prevention. Their web site is <http://www.nfpa.org/>.

The primary goal of NFPA is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically-based consensus codes and standards, research, training, and education.

MSDS Relevance

While NFPA codes cover several aspects of flammable materials pertinent to MSDS's, perhaps the most significant is the NFPA 704 Hazard Identification ratings system (the familiar NFPA "hazard diamond" shown on the right) for health, flammability, and instability. The NFPA's Fire Protection Guide to Hazardous Materials, 13th Edition, includes NFPA 704, "Standard System for the Identification of the Hazards of Materials for Emergency Response" as well as pertinent information from a variety of other NFPA publications (including NFPA 704 ratings for over 3,000 specific chemicals, information not included with NFPA 704).

What do the numbers and symbols on an NFPA fire diamond mean? The diamond is broken into four sections. Numbers in the three colored sections range from 0 (least severe hazard) to 4 (most severe hazard). The fourth (white) section is left blank and is used only to denote special fire fighting measures/hazards.



	<u>Health Hazard</u>	
	4	Very short exposure could cause death or serious residual injury even though prompt medical attention was given.
	3	Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
	2	Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
	1	Exposure could cause irritation but only minor residual injury even if no treatment is given.
	0	Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

	<u>Flammability</u>	
	4	Will rapidly or completely vaporize at normal pressure and temperature , or is readily dispersed in air and will burn readily.
	3	Liquids and solids that can be ignited under almost all ambient conditions.
	2	Must be moderately heated or exposed to relatively high temperature before ignition can occur

1	Must be preheated before ignition can occur.
0	Materials that will not burn.

Instability¹	
4	Readily capable of detonation or of explosive decomposition or reaction at normal temperatures and pressures .
3	Capable of detonation or explosive reaction, but requires a strong initiating source or must be heated under confinement before initiation, or reacts explosively with water.
2	Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.
1	Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.
0	Normally stable, even under fire exposure conditions, and are not reactive with water.



¹ Prior to 1996, this section was titled "Reactivity." The name was changed because many people did not understand the distinction between a "reactive hazard" and the "chemical reactivity" of the material. The numeric ratings and their meanings remain unchanged.

Special Hazards	
	<p>This section is used to denote special hazards. There are only two NFPA 704 approved symbols:</p> <p style="padding-left: 40px;">OX This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.</p> <p style="padding-left: 40px;">W Unusual reactivity with water. This indicates a potential hazard using water to fight a fire involving this material.</p>
ACID	This indicates that the material is an acid . a

	corrosive material that has a pH lower than 7.0
ALK	This denotes an alkaline material, also called a base . These caustic materials have a pH greater than 7.0
COR	This denotes a material that is corrosive (it could be either an acid or a base).
	This is another symbol used for corrosive .
	The skull and crossbones is used to denote a poison or highly toxic material. See also: CHIP Danger symbols .
	The international symbol for radioactivity is used to denote radioactive hazards; radioactive materials are extremely hazardous when inhaled .
	Indicates an explosive material. This symbol is somewhat redundant because explosives are easily recognized by their Instability Rating .

Your door sign must contain the highest number in each category that you find in the laboratory (you do this by clicking in each diamond and choosing from the drop down menu).

Example: If the highest flammable for chemicals in your laboratory were 3 (but you also have 2 or 1), 3 would be the one you place in the red diamond. Repeat this for all of the diamonds.

For the White Diamond, click in each field and either leave blank or choose a hazard from the drop down menu.

W=Water Reactive

Acid=Acid

Alk=Alkaline

Corr=Corrosive

Oxy=Oxidizer

2. LABORATORY HAZARDS

Using your mouse, click on any box whose hazard corresponds to your laboratory.

If you have any Biological Hazard, click on the field underneath the words “Biosafety Level” and choose from the number 1, 2, or 3 to indicate the biosafety level of your laboratory.

If you have any other hazards in the laboratory that are not listed on the label (such as toxins) click on the OTHER box and click on the field within that box to type in the other hazards in your laboratory.

3. LABORATORY INFORMATION

Click on the field next to “Principle Investigator” and type in the name of the PI

Click on each other field in that box and type in the appropriate information.

4. REQUIRED PERSONAL PROTECTIVE EQUIPMENT (PPE)

Click on each field in the box and choose from the list of PPE:

Example: If your laboratory requires the use of a lab coat, gloves, safety goggles, and respiratory protection, click on 4 of the fields and choose each PPE from the list, leaving the remainder of fields blank (they will not print).