

# Safety in the Workplace

By Tim Wade,  
Chairman, IATSE Safety Committee



In the workplace, your health and safety depends on what environment you are exposed to, and knowing which chemicals and substances you may come into contact with while on the job. Many times when we go to work, we unknowingly come in contact with different chemicals. Whether we are working in Live Theater, an Arena Venue or on a Sound Stage, these hazards are usually invisible and many of these substances that we encounter can be hazardous to our health. With that in mind, The Federal Government created the Hazard Communication Act in 1983 to address these problems. Due to the creation of this Act, States that have their own State OSHA programs such as California (Title 8, Subchapter 7, 5194), must incorporate the same standard into their own OSHA program. Federal OSHA created a Code of Federal Regulation (CFR) that will help us to understand what we can do to prevent an injury to our fellow workers or ourselves. The Hazard Communication Standard 1910.1200 in part reads:

Under the Standard, here are a few of the items required by the employer. Develop, implement and maintain a written hazard communication plan. They must also make certain that chemicals that are used in the workplace are labeled and identified as to the contents of those chemicals. They must also denote the appropriate personal protective equipment (PPE) for the employees' protection. They may use any symbol, picture or word that indicates a hazard warning. On stationary containers the employers may use placards, signs or any other written material. Any chemical that you may be exposed to, employers must provide training and information on those chemical hazards. They must provide information on how to access Manufacturers Material Safety Data Sheets (MSDS). The MSDS contains the information regarding the chemicals that you are using such as: the Name of the chemical, the Ingredients, the Manufactures Name, the physical data as well as any health or fire hazard. Employers must also provide as part of that written hazard communication plan, a list of all chemicals that you may be exposed to in the workplace as well as how you and new employees will be informed of those hazards.

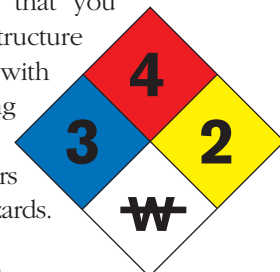
Another part of the Standard deals with labeling of chemicals that are on the job site.

This can be accomplished by using the National Fire Protection Association (NFPA) Diamond that is commonly seen on the outside of buildings. These signs can assist you in determining the possible hazards that you may encounter when you enter that structure or identify the level of those hazards with those chemicals you might use during your work shift.

The NFPA diamond has four colors for you to use in determining those hazards. They are:

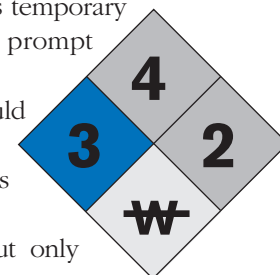
1. The Blue denotes Health Hazards.
2. The Red denotes Flammability.
3. The Yellow denotes Instability or Reactivity.
4. The White denotes Special Hazards.

Using the charts below, you can see how these diamonds tell you of the problems that you may encounter when you enter the building.



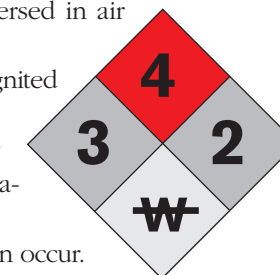
## HEALTH HAZARD

- 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, if no treatment is given.
- 0 Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.



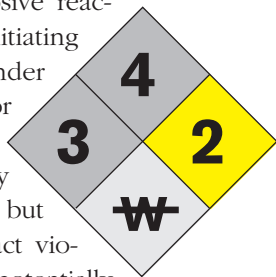
## FLAMMABILITY

- 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.



## INSTABILITY

- 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.



## SPECIAL HAZARDS

This section is used to denote special hazards. There are only two NFPA 704 approved symbols:

<p><b>OX</b> This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.</p> <p><b>W</b> Unusual reactivity with water. This indicates a potential hazard using water to fight a fire involving this material.</p>		
<b>ACID</b>	This indicates that the material is an acid, a corrosive material that has a pH lower than 7.0	
<b>ALK</b>	This denotes an alkaline material, also called a base. These caustic materials have a pH greater than 7.0	
<b>COR</b>	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.	

Some of the products you may encounter may include: dyes, glues, solvents, fuels and other flammable liquids, cleaners, resins, paint products, etc.

We as employees also have a responsibility when we are in the workplace, they include:

- ◆ You must know the Federal or State Hazard Communication Standard and understand its contents, rights and responsibilities.
- ◆ Understand safe handling practices, the proper personal protection requirements and the proper procedures for using those chemicals.
- ◆ You must know where the written Hazard Communication Plan and the MSDSs are located and the procedure for reviewing those data sheets. You must learn how to read and understand those MSDSs as well as understand the hazards associated with those chemicals.
- ◆ You must ensure that all containers are properly identified and labeled. You must also ensure that all safety rules are followed.
- ◆ You also have the right to have copies of any medical examinations, including drug test, special exams such as lead or those used for respiratory authorization.

It is impossible to cover all of chemicals and substances you might come in contact with on the job because some of those items may be covered by another Regulatory Agency. Those items would include: hazardous waste, pesticides, food, tobacco, cosmetics or consumer products that would be used in a normal consumer environment.

Knowing where and how to find information on chemicals and substances used in the workplace could save you from serious health problems in the future. We cannot encompass all of the Hazard Communication Standard in one article but you may find more information about this standard or any other Standard by going to the Federal OSHA web site at <http://www.osha.gov/>. Look for the Standards on the home page and scroll down to 1910.1200 where you can read more about Hazard Communications. States such as California have their own State OSHA's. Those Standards will be the same as Federal OSHA or in some cases may have requirements that might require more of the employer or from you, the employee.

