Chemical Labels – NFPA

Every person who works with or around chemicals must understand the Labeling System

Hazards - four basic hazard classifications for chemicals

Health Hazards are those that can affect the immediate or long term health of an employee if exposed to a specific chemical. Acute effects of exposure are those that present symptoms when exposure occurs, such as when skin is exposed to an acid. Delayed or long term health effects can also occur from chemical exposure, such as cancer. Health effects for any given chemical will depend on the toxicity, duration of exposure and amount of exposure.

Fire Hazard ratings range from *non-flammable* to *highly flammable*. The NFPA ratings are based on the material flashpoint - the temperature at which the chemical *vapors* will ignite.

Reactivity ratings describe the hazards of the material stability - some chemicals will explode or react violently if exposed to heat or shock

Other Hazards - special markings are required if the material is radioactive, an oxidizer, acid or base or will react when exposed to other materials.

Hazard Controls include:

- Labeling of all chemicals
- Proper chemical storage containers & areas
- Segregation of incompatible chemicals
- Personal Protective Equipment
- Use of chemicals by training and authorized employees

Use of minimum amount necessary Bonding & Grounding of flammable liquid containers

Fire Hazards

- Flash Points
- 4 Below 73 ⁰ F
- 3 Below 100 ⁰ F
- 2 Above 200 ⁰ F
- 1 Will Not Burn

Health Hazards

4 - Deadly

- 3 Extreme Danger
- 2 Hazardous
- 1 Normal Material

Reactivity

4 - May Detonate

O Normally stable

- 3 Shock or heat may cause
- detonation
- 2 Violent chemical change
- 1 Unstable if heated 0 - Stable FLAMMABLE 4 Extremely flamable 2 Ignites when moderately Ignites at normal heated 3 1 Must be preheated to burn temperatures O Will not burn HEALTH REACTIVITY , 4 May detonate - Vacate 4 Too dangerous area if materials are to enter vapor or exposed to fire Liquid 3 Strong shock or heat may 4 3 Extremely dangerous detonate - Use monitors use full proctective from behind explosive clothing 2 Hazardous - Use resistant barriers 3 2 Violent chemical 3 breathing change possible apparatus - Use hose 1 Slightly hazardous streams from O Like ordinary material distance ₩ 1 Unstable if heated - Use normal precautions

Specific

Hazards **OXY - Oxidizer** ACID - Acid ALK - Alkali **CORR - Corrosive**

W - Use No Water - Radiation Hazard