Hazard Communication
Right to Know

- HazCom standard ensures the right of workers to know about the chemicals they work with
- HazCom is
  - Frequently cited by OSHA
  - The process of identifying hazards associated with many chemicals workers use
Right to Know

HazCom focuses on five main areas

1. Identifying hazardous and toxic substances
2. Product warning labels
3. MSDS
4. Written program
5. Worker training
Types of Hazards

• Definition of hazardous chemical
  – Is very broad
  – Includes most chemicals in the workplace

• Hazardous chemicals are divided into two categories
  – Physical hazards
    ◦ Produce dangerous situations outside of body
  – Health hazards
    ◦ Cause measurable change in body function
Hazard Communication Standard

Manufacturers must
• Identify physical or health hazards
• Report hazards by label and MSDS
Hazard Communication Standard

Companies must
• Label containers
• Maintain MSDS inventory
• Maintain workplace chemical inventory
• Have written HazCom program
• Train workers on
  – HazCom program
  – Hazardous chemicals in their work area
Hazard Communication Standard

Workers must

• Follow instructions
• Use PPE properly
• Follow safe work practices
• Not use chemicals in unlabeled containers
Chemical Inventory

• Includes all chemicals at a jobsite
  – Be kept current
  – Include any new chemicals added
• Contractors must notify operators of chemicals being brought to the facility
Product Warning Labels

• Effectively communicate specific hazards of a chemical
• Prominently displayed on hazardous substance containers and must
  – Contain the name of the product
  – Provide name and address of manufacturer
  – List appropriate hazard warnings
  – Be legible and written in English
Symbolic Labels

NFPA 704 label

- Primarily for firefighters and other emergency responders
- Numerical rating
  - 0 represents no or minimal hazard
  - 4 represents most severe hazard
- Color coded
  - Red: flammability
  - Blue: health
  - Yellow: instability
  - White: special hazard
Symbolic Labels

HMIS® label
- Similar to NFPA label
- Blue, red and yellow segments have the same definition as NFPA level
- Number system remains unchanged between NFPA and HMIS®
- White segment in HMIS® uses letters to indicate PPE needed to work with the chemical
  - Decoded using reference chart (A-K and X)
Material Safety Data Sheet

- Gives detailed information about hazards
- Must be
  - Available to workers
  - Located near areas where chemicals are used

Chemical specific information should always be available on MSDSs.
**MATERIAL SAFETY DATA SHEET**

**MEK**
- Trade Name: MEK
- CAS Number: 78-93-3
- OSHA PEL: 200 ppm ACGIH TLV: 200 ppm

**Physical/Chemical Characteristics:**
- Appearance and Odor: Colorless liquid, pleasant odor
- Boiling Point: 174.7°F, 79°C
- Vapor Pressure: 0.000106 mm Hg
- Vapor Density (Air=1): 2.48

**Health Hazard Data Cont.**
- Signs/Symptoms of Overexposure: See health hazards
- Medical Conditions Aggravated by Exposure: None specified by manufacturer
- Emergency/First Aid Procedures: Ingestion: call MD immediately. Skin: flush w/cold water. Inhalation: remove to fresh air, if breathing irregular or stopped, start resuscitation, administer oxygen.
- Eyes: flush w/cold water for at least 15 minutes, call MD.

**Precautions for Safe Handling and Use:**
- Neutralizing Agent: None specified by manufacturer.
- Waste Disposal Method: Disposal must be in accordance federal, state & local regulations. Absorb on solids and incinerate. Run-off to waterway creates a fire hazard; notify fire agencies.
- Other Precautions: Avoid contact w/eyes & prolonged or repeated contact w/skin.

**Control Measures:**
- Respiratory protection: NIOSH/MSHA approved organic canister or air-supplied mask
- Ventilation: Use with adequate ventilations. No smoking or flame.
- Protective gloves: Synthetic rubber gloves
- Eye Protection: ANSI approved chemical workers goggles
- Other Protective Equipment: ANSI approved emergency eye wash
- Work Hygienic Practices: None specified by manufacturer

**Transportation Data:**
- UN No.: 3325
- DOT Category: 3A
- Packing Group: III
- Class: 3
- Hazards: Oxidizer

**Controlled Temperature:**
- Storage temperature: 50°F to 80°F
- Freezing Point: -20°F

**Material Compatibility:**
- Water: Stable
- Acids: May react
- Bases: May react
- Solvents: Stable
- Explosives: Stable

**Inhalation:**
- Can result in: headache, dizziness, nausea, weakness, & loss of consciousness

**Carcinogenicity:**
- NTP: NO Carcinogenicity
- IARC: NO Carcinogenicity
- OSHA: NO

**Explanation Carcinogenicity: NA**

**Labeling Information:**
- Emergency Number: 911
- NFPA: Fire 3, Health 2, Reactivity: 1; special hazard NA
Required Information

Information required on MSDS
• Common name and chemical name
• Name, address and phone number of the manufacturer
• Emergency phone numbers
• Date the form was issued
• Physical or health hazards
Required Information

- Safe exposure limits
  - PEL
  - TLV-TWA
- PELs and TLV-TWAs
  - 8 hours a day, 5 days a week
- REL
  - Established by NIOSH
Required Information

• STEL
  – Amount of material a worker can be exposed to for no more than fifteen minutes at a time

• ACC
  – Designated maximum amount of contaminant that a worker can be exposed to
Required Information

Physical information

- pH
- Vapor density
- Specific gravity
Fire and Explosion Information

• Auto ignition temperature
  – Temperature at which material will spontaneously ignite

• Flashpoint
  – Temperature at which enough vapor is given off that combustion will occur in the presence of a spark
Fire and Explosion Information

- Explosive limits or flammable limits
  - LEL: minimum concentration of a gas or vapor needed for ignition
  - UEL: maximum concentration of a gas or vapor which will allow ignition

- Appropriate firefighting techniques
- Unusual fire hazards
Miscellaneous MSDS Information

Other hazards found include

- Dangers from chemical reactions
- Measure of control
  - Engineering controls
  - PPE
  - Safe storage
  - Safe handling practices
Written HazCom Program

• Contains a current chemical inventory
• Describes how labels, MSDS and training will be provided
• Describes how workers will be informed of the hazards
• How workers will be told of the hazards associated with non-routine tasks
Written HazCom Program

- Who will be responsible for conducting training
- Describes where workers can find and use appropriate hazard information
- Describes procedures to train new workers at the time of their initial assignment and when new hazards are introduced

You have the right to see the written HazCom plan.
Training

Training must cover

• Detecting the release of hazardous chemicals
• Physical and health hazards of chemicals at the jobsite
• Dangers of any job performed
• Protecting yourself
• Details of HazCom program developed by company
Transferability of Training

- The company is always ultimately responsible for ensuring that workers are adequately trained
- The company will be cited for the deficiency regardless of who provided the training