

# BLR's Safety Training Presentations

Hazard Communication 29 CFR 1910.1200



# Close Encounters with Chemicals

- We encounter chemicals almost every day
  - Filling your vehicle with gasoline
  - Cleaning the bathroom
  - Applying pesticides or insecticides
  - Using solvents or acids at work
- Many chemicals can cause injury or illness if not handled properly.

# Hazard Communication 'Goals'

- Right to Know chemical hazards
- PPE, first aid, spills/leaks
- Labels, Material Safety Data sheets
- Quiz

# Right to Know

- OSHA created the Hazard Communication Standard to help ensure your safety when working with hazardous chemicals.
- You have a **RIGHT TO KNOW** about the hazardous chemicals you use on the job and how to work safely with those chemicals.

# Hazard Communication Standard

## Chemical manufacturers must:

- Determine a chemical's hazards
- Provide labels and MSDSs

## Employers must:

- Provide a hazard communication program
- Maintain MSDSs
- Train on hazardous materials

# HazCom Standard (cont.)

## Employees must:

- Read labels and MSDSs
- Follow employer instructions and warnings
- Identify hazards before starting a job
- Participate in training

# Chemical Hazards

## Physical Hazards:

- Flammable
- Explosive
- Reactive

## Health Hazards:

- Corrosive
- Toxic

# Routes of Entry

- Skin and eye contact
- Inhalation
- Swallowing
- Penetration (skin absorption)

# Chemical Exposure

- Dosage = exposure level allowed per chemical, per average employee, per 8 hour day
- Acute effects = symptoms that disappear once the victim is no longer exposed to the chemical
- Chronic effects = long term effects developed over a long period of exposure

# Personal Protective Equipment

- Dust masks and respirators
- Glasses, goggles, and face shields
- Hearing protection
- Gloves
- Foot protection
- Head protection
- Aprons or full-body suits



# Hazardous Materials First Aid

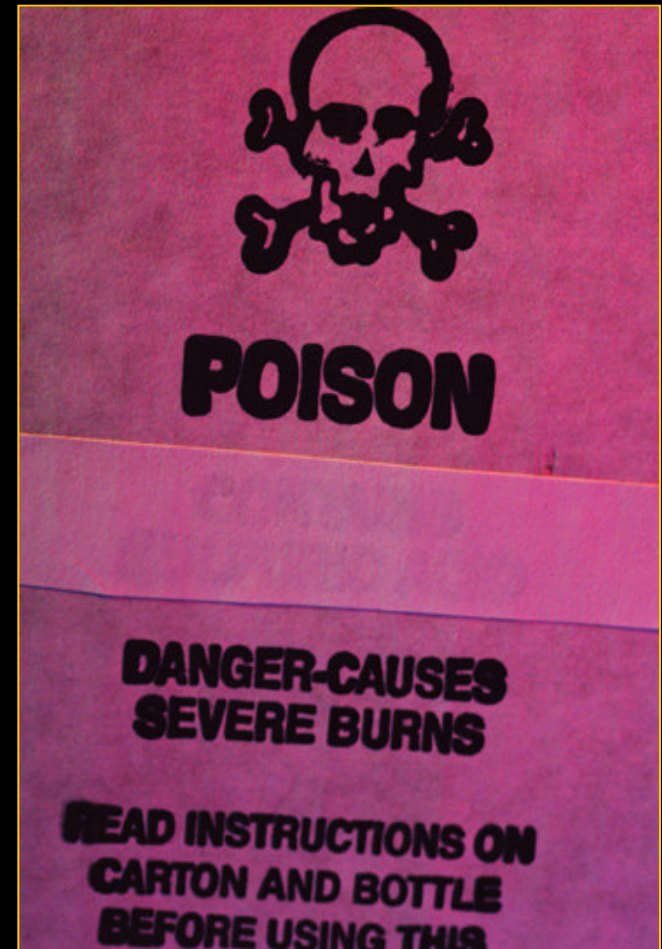
- Eyes: Flush with water for 15 minutes
- Skin: Wash with soap and water
- Inhalation: Move to fresh air
- Swallowing: Get emergency medical assistance

# Spills and Leaks

- Evacuate the area
- Notify a supervisor or the emergency response team
- Remove ignition sources (if safe to do so)
- Stay away

# Importance of Labels

- The identity of the chemical
- Name, address, and emergency phone number of the manufacturer
- Physical and health hazards
- Special handling instructions
- Basic PPE recommendations
- First aid, fire response, spill cleanup



# NFPA Labeling Systems

NFPA = National Fire Protection Association

- Blue = Health
- Red = Flammability
- Yellow = Reactivity
- White = Other hazards or special handling

Scale: 0 (No Hazard) to 4 (Extreme Hazard)

# NFPA Classification Chart



# Other Label Warnings

- The identity of the chemical
- Name, address, and emergency phone number of the manufacturer
- Physical and health hazards
- Special handling instructions
- Basic PPE recommendations
- First aid, fire response, spill cleanup



# Material Safety Data Sheet Program

- Reading an MSDS
- MSDS locations
- Finding a specific MSDS

# Material Safety Data Sheets

- Chemical and manufacturer identity
- Hazardous ingredients
- Physical and chemical characteristics
- Fire, explosion, and reactivity

# Material Safety Data Sheets (cont.)

## ■ Health hazards

- Routes of entry
- Exposure levels (PEL or TLV)
  - PEL - Permissible Exposure Level or
  - TLV - Threshold Limit Value
- Symptoms of exposure
- First-Aid and emergency information

# Material Safety Data Sheets (cont.)

- Personal Protective Equipment (PPE)
- Safe handling and storage
- Spills and leaks
- Compliance issues

# St. Lawrence University MSDS Location

- To Obtain a copy of an MSDS
  - Ask your immediate supervisor
  - Call the 3E Company 24hrs/day 7days/week
    - 1-800-451-8346
    - Information needed when calling
      - Product name & number
      - Manufacturer name
      - UPC code (if available)

# More contact information

- Material Safety Data Sheets
  - 1-800-451-8346
  
- 3 E Company
  - 1905 Aston Avenue, Carlsbad, CA 92008
  - Telephone: 760-602-8700
  - Fax: 760-602-8888

# St. Lawrence University Safety Information

- Human Resources 229-5596
- Environmental Health & Safety 229-5913
- Security & Safety 229-5555
- Your immediate supervisor \_\_\_\_\_
- [www.stlawu.edu](http://www.stlawu.edu)

# Emergency Information

- On Campus

- Call Security and Safety x5555  
(315-229-5555)

- Off Campus

- Call 911

# Hazard Communication Goals

- Right to Know and Chemical Hazards
- PPE, First aid, and Spills/leaks
- Labels and Material safety data sheets
- Quiz

# Hazard Communication Summary

- Identify chemical hazards by reading labels and MSDSs
- Follow warnings and instructions, or ask your supervisor if in doubt
- Use the correct personal protective equipment
- Practice sensible, safe work habits
- Learn emergency procedures

# Quiz

1. Chemical manufacturer's must label containers and provide \_\_\_\_\_.
2. Employers should keep material safety data sheets in a locked file cabinet. **True or False**
3. Dizziness, nausea, rashes, and respiratory irritation are signs of \_\_\_\_\_ exposure.
4. List three routes by which a chemical can enter the body:  
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.
5. Household chemicals are never as hazardous as chemicals used at work. **True or False**

# Quiz (cont.)

6. On NFPA labels, a 4 in the red diamond indicates an extreme health hazard. **True or False**
7. Typical first-aid for chemicals splashed in the eyes includes \_\_\_\_\_.
8. You will only know the health hazards and PPE requirements if you \_\_\_\_\_.
9. A \_\_\_\_\_ can be used to protect against breathing hazardous vapors or gases.
10. If you see a chemical spill, you should clean it immediately. **True or False**

# Quiz Answers

1. Material safety data sheets must be provided by the manufacturer.
2. False. MSDSs must always be accessible to the employees.
3. These are all symptoms of acute effects, or short-term exposure.
4. The primary routes chemicals enter the body are skin and eye contact, inhalation, and swallowing.
5. False. Many household chemicals are more hazardous than chemicals found at work.

# Quiz Answers (cont.)

6. False. The red diamond indicates flammability hazards, not health hazards.
7. Flushing the eyes for 15 minutes is the typical first aid for chemicals splashed in the eyes.
8. You must read the labels and MSDSs to learn how to protect yourself from the hazards of a chemical.
9. Respirators protect against breathing hazardous vapors and gases.
10. False. Only attempt to clean a chemical spill if you've been properly trained.

# Safety is everyone's business

- Practice Safety  
at work and at home !