

Hazard Communication presented by Melissa Crowder



BLR
BUSINESS & LEGAL REPORTS, INC.

Session Objectives

You will be able to:

- Understand the hazards of chemicals in your work area
- Interpret information on warning labels
- Understand material safety data sheets (MSDSs)
- Protect yourself
- Respond to emergencies
- Where to find UF Written Plan template
- Departmental responsibilities

© Business & Legal Reports, Inc. 0907

Hazcom vs. Lab Safety

Hazcom is for non-lab employees
encountering chemicals
Shop chemicals
Farm crew – pesticides, etc.
Lab Safety/Chemical Hygiene Plan
Lab chemicals

© Business & Legal Reports, Inc. 0907

Encounters with Chemicals

We encounter chemicals almost every day

- Filling your vehicle with gasoline
- Cleaning the house
- Applying pesticides or insecticides
- Using solvents or acids at work

Many chemicals can cause injury or illness

© Business & Legal Reports, Inc. 0907

Encounters with Chemicals

(cont.)

- 30 million workers exposed or potentially exposed to 650,000 chemicals annually
- 20,000 incidences of exposure annually result in lost work days



© Business & Legal Reports, Inc. 0907

Hazard Communication Law

- A written hazard communication program
- A list of hazardous chemicals
- MSDSs
- Training

© Business & Legal Reports, Inc. 0907

Hazard Communication Law (cont.)

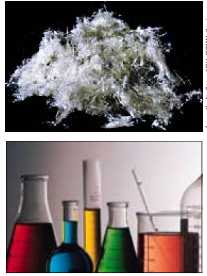
You must be able to:

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

© Business & Legal Reports, Inc. 0907

Types of Chemicals

- Solids
 - Dust and powder
 - Fumes and fibers
- Liquids
 - Fluids and mists
- Gases and vapors



© Business & Legal Reports, Inc. 0907

Physical Hazards

- Flammable
- Explosive
- Reactive



© Business & Legal Reports, Inc. 0907

Health Hazards

- Short-term effects include headache, dizziness, skin irritation.
- Long-term effects may be liver or lung damage or even cancer.

Some examples of health hazards are:

- Corrosive
- Toxic



© Business & Legal Reports, Inc. 0907

How Chemicals Enter Your Body

- Skin absorption and eye contact
- Inhalation



Image Credit: State of WA WISHA Services

© Business & Legal Reports, Inc. 0907

How Chemicals Enter Your Body (cont.)

- Swallowing (eating contaminated food)
- Cut, puncture, or injection



© Business & Legal Reports, Inc. 0907

How Chemicals Affect Your Body

- Dosage
- Acute effects
- Chronic effects



© Business & Legal Reports, Inc. 0907

Exposure Limits

- Permissible Exposure Limits (PEL)
 - Concentrations expressed in parts per million (ppm) or milligrams or cubic meter
- Threshold limit value (TLV)
 - TLV-Time Weighted Average (TLV-TWA)
 - TLV-Short-Term Exposure Limit (TLV-STEL)
 - TLV-Ceiling Limit (TLV-C)

© Business & Legal Reports, Inc. 0907

What's Wrong Here?

- Welder assigned to clean screens
- Given a cleaner, brush, and rag
- Identify the hazard(s)



© Business & Legal Reports, Inc. 0907

Check the Label

- Chemical identity
- Manufacturer contact information
- Physical/health hazards
- Special handling
- PPE recommendations
- First aid, fire response, and spill cleanup

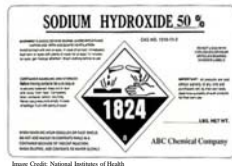


© Business & Legal Reports, Inc. 0907

What's on the Label

The product label shows:

- The name of the product
- The manufacturer
- Miscellaneous information
- Hazard warning
- List of hazardous ingredients



© Business & Legal Reports, Inc. 0907

NFPA Labeling Systems

- Blue = Health hazard
- Red = Flammability
- Yellow = Reactivity
- White = Other hazards
- Scale: 0 (No Hazard) to 4 (Extreme Hazard)



© Business & Legal Reports, Inc. 0907

All secondary containers must be labeled

Identification of the substance
Specific warning statement
Nonhazardous materials should also be labeled to avoid confusion.

© Business & Legal Reports, Inc. 0907

Information Resource: The MSDS

- It is a written description of a hazardous chemical
- It describes the risks, precautions, and remedies to exposure
- Readily available to you
- Read the MSDS before working with a chemical

© Business & Legal Reports, Inc. 0907

MSDS (cont.)

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

© Business & Legal Reports, Inc. 0907

MSDS (cont.)

Health hazards

- Routes of entry
- Exposure levels (PEL or TLV)
- Symptoms of exposure
- First-aid and emergency information

© Business & Legal Reports, Inc. 0907

MSDS (cont.)

- PPE
- Safe handling and storage
- Spills and leaks
- Compliance issues

© Business & Legal Reports, Inc. 0907

PPE: Physical Protection

Protect yourself:

- Face shields
- Gloves
- Foot protection
- Head protection
- Aprons or full-body suits



© Business & Legal Reports, Inc. 0907

PPE: Respiratory Protection

- During installation of engineering controls
- During maintenance
- Non-routine tasks
- Emergency response
- When other controls are inadequate
- When other controls are not feasible



© Business & Legal Reports, Inc. 0907

Emergency Procedures

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



© Business & Legal Reports, Inc. 0907

Emergency Response to Chemical Spills or Leaks

- Evacuate the area
- Notify a supervisor or the emergency response team
- Stay away



© Business & Legal Reports, Inc. 0907

What Should be Done?

- Ordered to clean the screens with cleaners, brush, and rag
- No chemical information
- No PPE



© Business & Legal Reports, Inc. 0907

Key Points to Remember

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

© Business & Legal Reports, Inc. 0907

Hazard Communication Program Elements

Written Program - Site Specific
Material Safety Data Sheets (MSDS)
Chemical Inventory
Labeling
Employee Training

© Business & Legal Reports, Inc. 0907

Department's Responsibility Who and How Should I Train?

All personnel using hazardous substances.
Training for large or small groups
Training one-on-one
Whatever works best for your audience.



© Business & Legal Reports, Inc. 0907

When should I train?

Within 30 days of today then:
Should be done at the time of employees
initial assignment before handling
hazardous materials
Should be done when new chemicals are
introduced and when MSDS have been
revised

© Business & Legal Reports, Inc. 0907

What should I cover? Also listed on our website <http://www.ehs.ufl.edu/programs/os/hazcom/>

Review the following with personnel

- The Hazard Communication Program and Site Specific Information
- The physical characteristics and health effects of each hazardous chemical used.
- The location of the MSDS and how to use them.
- The proper and safe handling of chemicals.
- Methods used to detect chemicals in the workplace.
- Methods to protect against exposure, including PPE and engineering controls.
- Appropriate emergency procedures.
- The chemical labeling system.
- How to obtain and use hazard information.

© Business & Legal Reports, Inc. 0907

Written Program

Must be site specific.

Tells how and where to access information.

Tells who is responsible.

Gives emergency information.

Tells how information is conveyed and documented.

Customize template to achieve what works best for your group.

Chemical Inventory

Maintained by shops or departments.
by product name

© Business & Legal Reports, Inc. 0907

What must I do now?

Complete site specific Hazard Communication Plan

Complete chemical inventory

Obtain MSDS and make them accessible.

Train current employees and then again as new hazards are introduced or anticipated to be used.

Note: you do not need to actually train all materials you have but the training must be done before each of those materials is used.

Train new employees before they work with hazardous materials.

Maintain training records.

© Business & Legal Reports, Inc. 0907
