

Hazard Communication

General



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Types of chemicals

- Different states that chemicals can be in:
 - Solids
 - Liquids
 - Gases



Types of chemicals

- Major hazards associated with chemicals
 - Physical hazards
 - Health hazards



Health hazards

Health hazards cause health effects upon exposure



- Acutely toxic
- Chronically toxic
- Carcinogenic
- Mutagenic
- Teratogenic
- Sensitizing agent
- Corrosive
- Irritant

Physical hazards include any chemical that is:

- Combustible liquid
- Compressed gas
- Explosive
- Flammable
- Organic peroxide
- Oxidizer
- Pyrophoric
- Unstable (reactive)
- Water-reactive



Hazard communication program

- Must comply with Hazard Communication Standard - 29 CFR 1910.1200



Hazard communication program

Written program must include:

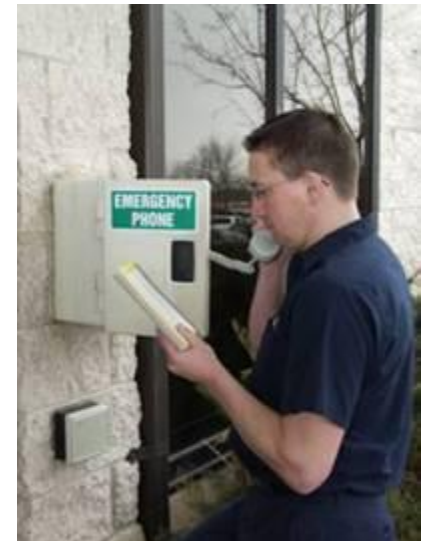
- a list of hazardous chemicals present in the workplace
- MSDS
- labeling system information



Hazard communication program

Written program must include:

- employee training information
- information regarding non-routine hazards
- methods of informing employers of other workers (contractors)



Hazard communication program

- Written program does not have to be accessible to every work area and every work shift
- Written program is available to workers upon request



Accessing Hazcom documents

- Workers must know how to obtain, and the location of:
 - the written hazard communications program
 - lists of hazardous chemicals
 - MSDSs



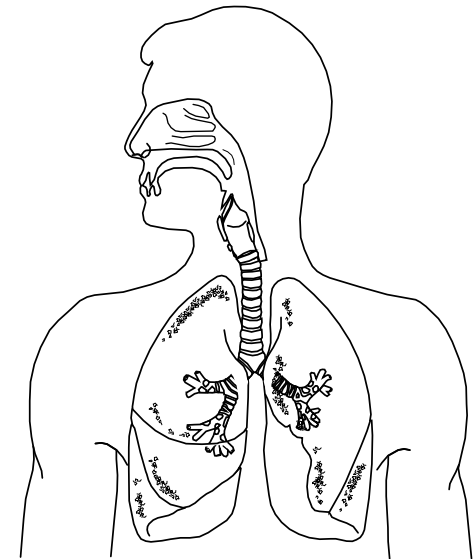
Protective measures

- Work practices
- Engineering controls
- Personal protective equipment



Chemicals can enter the body through:

- **Inhalation:** your lungs if you breath fumes, mists or dust
- **Absorption:** your skin if liquid or dust touches or spills on you or splashes in your eyes
- **Ingestion:** your mouth if you eat after handling chemicals
- **Ingestion:** accidental swallowing of a chemical



Personal protective equipment

- Know where safety equipment supplies are kept
- Understand how to use PPE
- Understand the benefits and limitations of PPE

Personal protective equipment

- Major categories
 - Head protection
 - Eye and face protection
 - Respiratory protection
 - Hand protection
 - Foot protection



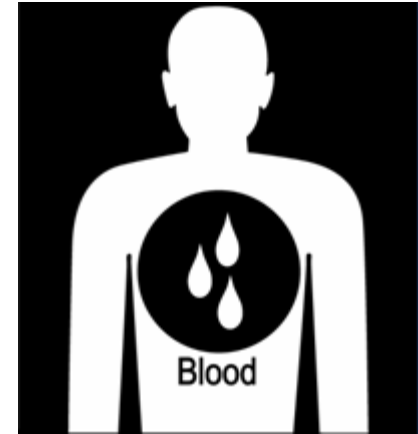
Material safety data sheets

- Primary tool for getting detailed chemical information
- Must be readily available



Material safety data sheets include

- Chemical identity
- Physical and chemical characteristics
- Physical and health hazards
- Primary routes of entry



Material safety data sheets include

- PEL, TLV, other exposure limits
- Whether it is a carcinogen
- Precautions for safe handling/use
- Recommended engineering controls



Material safety data sheets include

- Emergency first aid procedures
- Date of preparation
- Name, address, phone number of manufacturer, importer, responsible party



Material safety data sheets

- MSDSs may contain recommendations from ANSI
- MSDSs also provide information regarding:
 - signs and symptoms of exposure
 - personal protective equipment
 - spill and leak clean-up
 - labeling information



Each chemical must have an MSDS

- MSDS must be available to downstream employers from:
 - chemical manufacturers
 - importers
 - distributors



Labeling requirements

- Labels warn of potential dangers
- Labels are not intended to be the sole source of information
- Labels serve as an immediate warning



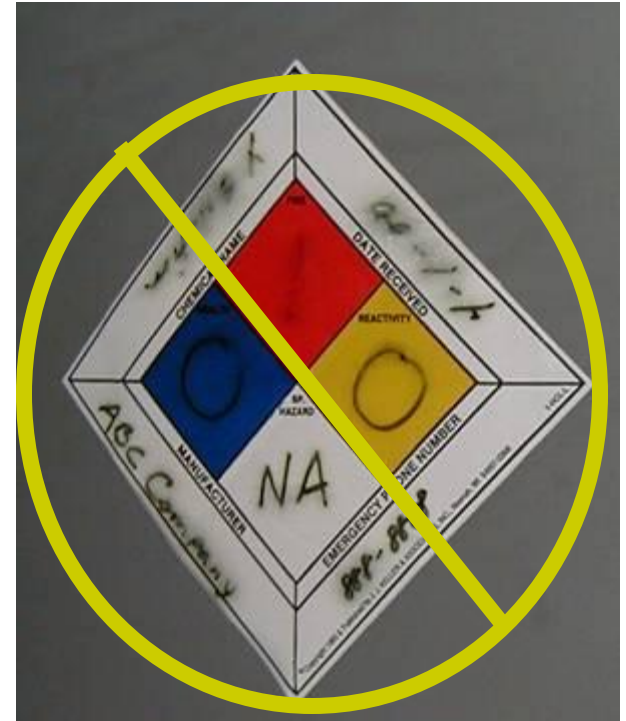
Labeling requirements

- Labels must be keyed to MSDSs
- Labels must contain:
 - the identity of the hazardous chemical
 - appropriate hazard warnings
 - the name, address of the chemical manufacturer, importer, other responsible party



Labeling requirements

- Ensure that labels do not come off, become smudged or unreadable
- For hard-to-label containers, use:
 - signs or placards
 - process sheets, or batch tickets





Labeling requirements

- Be able to quickly identify the general hazard of any material:
 - NFPA system identifies:
 - health hazards
 - flammability hazards
 - reactivity hazards
 - special hazards



Labeling requirements

- Be able to quickly identify the general hazard of any material:
 - HMIS system identifies
 - health hazards
 - flammability hazards
 - physical hazards



Hazards of non-routine tasks

- Know what chemicals you work with and their hazards
- Know the contents of pipes



First aid and emergency procedures

- Activate during contamination, spills, overexposure events
- Contents of first aid kits
- Proper use and location of first aid kits



First aid and emergency procedures

- Written procedures for sudden and unusual incidents:
 - Chemical spills onto clothing or skin
 - Work area contamination
 - Air contamination

