



UNIVERSITY *of*  
DENVER

## OSHA - Hazard Communication

# ***Hazard Communication***

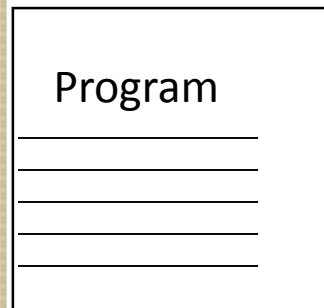
## ***“Employee Right to Know”***



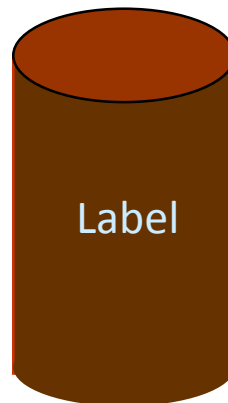
# Components of OSHA's Hazard Communication Standard

To ensure that employers and employees know of the hazards associated with chemicals, and how to protect themselves so that the incidence of illness and injuries due to hazardous chemical exposure is eliminated.

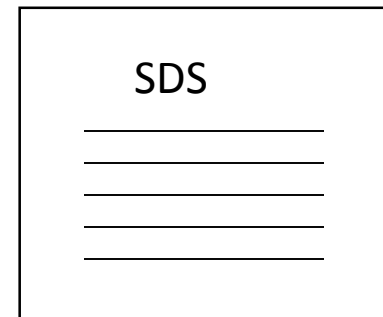
Written Hazard  
Communication  
Program



Container  
Labeling



Safety  
Data Sheets



# Employer Responsibilities

- Identify and list hazardous chemicals in their workplaces (HMIS), this means each department must maintain a chemical inventory.
- Maintain Safety Data Sheets (SDS's), (before 2012 they were known as MSDS's), and labels for each hazardous chemical
- Implement a written HazCom program
- Communicate hazard information to employees through labels, SDS's, and formal training programs

# Hazardous “Materials” defined

## **OSHA:**

Any material that is a physical or health hazard to persons in the workplace

## **DOT:**

Any substance or material capable of posing an unreasonable risk to health, safety, and property when transported

## **EPA:**

A chemical that poses a threat to the environment when a release occurs

**NRC:** Materials that are hazardous because they produce ionizing radiation

# EMPLOYEE RESPONSIBILITIES

- ALL employees must be aware of the Globally Harmonized System (GHS)
- You must be able to find, read, and understand SDS's and labels
- Know, respect, and follow rules, processes, and regulations, (General Duty Clause)

# The OSHA Globally Harmonized System (GHS)

## What are Pictograms?

Health Hazards



Physical Hazards



Environmental Hazards



# Safety Data Sheets

## What are the sections of an SDS?

**(1) Chemical manufacturers and importers must obtain or develop a safety data sheet for each hazardous chemical they produce or import. Employers must have a safety data sheet in the workplace for each hazardous chemical in the workplace.**

**Section 1, Identification;**

**Section 2, Hazard(s) identification;**

**Section 3, Composition /information on ingredients;**

**Section 4, First-aid measures;**

**Section 5, Firefighting measures;**

**Section 6, Accidental release measures;**

**Section 7, Handling and storage;**

**Section 8, Exposure controls/personal protection;**

**Section 9, Physical and chemical properties;**

**Section 10, Stability and reactivity;**

**Section 11, Toxicological information;**

**Section 12, Ecological information;**

**Section 13, Disposal considerations;**

**Section 14, Transport information;**

**Section 15, Regulatory information; and**

**Section 16, Other information, including date of preparation or last revision.**



## SDS's

- Must have a copy for each hazardous chemical in the workplace
- Must be readily available to employees
- Copies in individual departments or work stations
- What about household products?

# Safety Data Sheets

Prepared by the chemical manufacturer or importer and describe:

- Physical hazard and health hazards
- Symptoms of exposure
- Routes of exposure
- Exposure limits
- Personal Protective Equipment (PPE)
- Precautions for safe handling and use
- Emergency response and first-aid procedures

# Safety Data Sheets (cont'd)

- ▣ Must be in English (at least), and include information regarding the specific chemical identity and common names
- ▣ Must provide information about the:
  - Physical and chemical characteristics
  - Health effects
  - Identification (name, address, and telephone number) of the company

# CHEMICAL HAZARDS

- **Physical hazard:** A chemical that can burn, explode, release high pressure, spontaneously react on its own, or when exposed to water
- **Health hazard:** A chemical which can cause acute or chronic health effects in exposed employees

# PHYSICAL HAZARDS

- Explosives
- Fire Hazards
  - Flammables
  - Combustibles
  - Oxidizers
- Reactive Chemicals
- Compressed Gases

<https://youtu.be/hu62940nMmc>

# HEALTH HAZARDS

- Acute Health Effects
  - Effects from that appear soon after one exposure, and are usually severe
- Chronic Health Effects
  - Effects from multiple exposures that occur over a long period of time

# HEALTH HAZARDS

- Target organ chemicals
- Reproductive hazards
- Carcinogens
- Sensitizers
- Corrosives
- Irritants

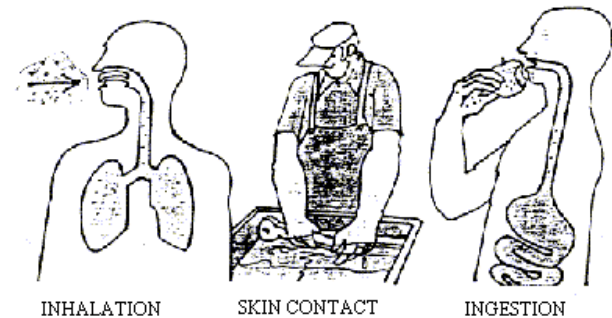
# Routes of Entry

Inhalation (breathing)\*

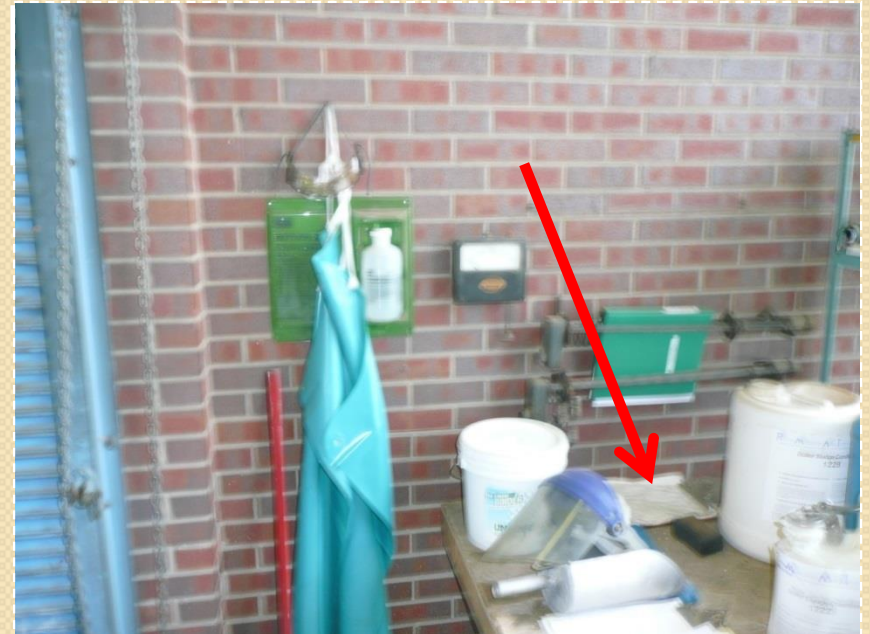
Absorption (contact)

Ingestion (swallowing)

Injection (puncture)







**Where are the SDS's?**

# How must chemicals be labeled?

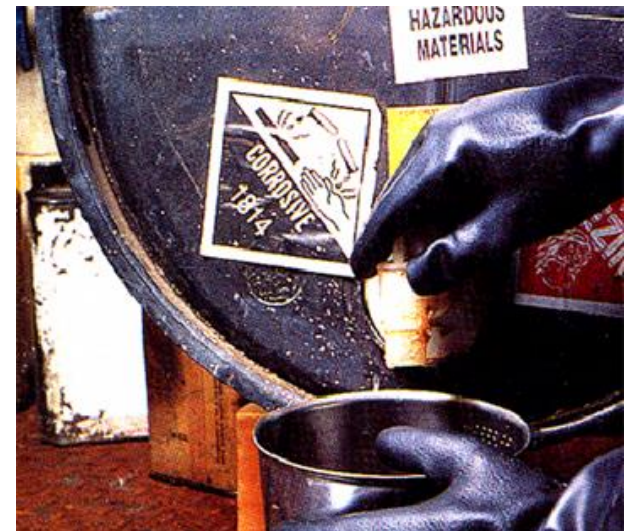
Each container of hazardous chemicals entering the workplace must be labeled or marked with:

- Full chemical name
- Appropriate hazard warnings
- Manufacturer information



# Container Labeling in the Workplace

- ▣ The hazard warning can be any type of message, picture, or symbol that provides information on the hazards of the chemical(s) and the targeted organs affected, if applicable
- ▣ Labels must be legible, in English, (plus other languages, if desired), and prominently displayed
- ▣ Employees need to notify supervisors to replace worn or missing labels





## Container Labeling at DU

# Where are chemicals at DU?

- Facilities Service Center/Parking
  - Paint
    - May need respirator – contact EHS
  - Corrosives
    - Shower/eye wash
    - Goggles/gloves/face shield
  - Fuel/Flammables
  - Degreasers/cleaners
  - Compressed gas shall be secured in upright position, labeled, and capped when not in use

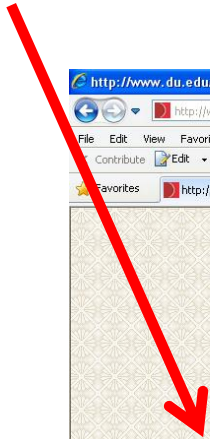
# Where are chemicals at DU?

- ▣ Laboratories
  - Even though there are < 40 labs at DU, they contain most of the hazardous chemicals on campus
    - ▣ Flammables
    - ▣ Reactives
    - ▣ Corrosives
- ▣ Schwayder Art
  - ▣ Acids for etching
  - ▣ Flammable paints, lacquers
  - ▣ Compressed gas

# Summary

- OSHA's Hazard Communication Standard is based on a simple concept - that employees have both a need, and a right, to know the hazards and identities of the chemicals they may be exposed to in the workplace

# www.du.edu/ehs



http://www.du.edu/ehs/ - Windows Internet Explorer

http://www.du.edu/ehs/

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Mission - The Environmental Health and Safety Department supports the University's mission by ensuring the health and well-being of University students, faculty, staff, and visitors. And by remaining a community leader in environmental stewardship and sustainability.

The Environmental Health and Safety Department assists the University community in reducing risk and injury through hazard recognition, evaluation and remediation. EHS acts as the University liaison to federal, state and local regulatory agencies related to environmental and occupational safety issues.

**Emergencies**

Life threatening 911

Other Emergencies x13000

**Staff Information**

**Report unsafe conditions**

**Report an injury**

Environmental Health & Safety 2100 S. University Blvd. Denver, Colorado 80208 Phone: 303 871 7501 Fax: 303 871 4465

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# Questions?

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