

City of Carson Employee Safety Program

Hazard Communication



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
- Personal protective equipment (PPE), first aid, spills/leaks
- Labels, material safety data sheets (MSDS)
- 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 the use of hazardous materials

Hazard Communication 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



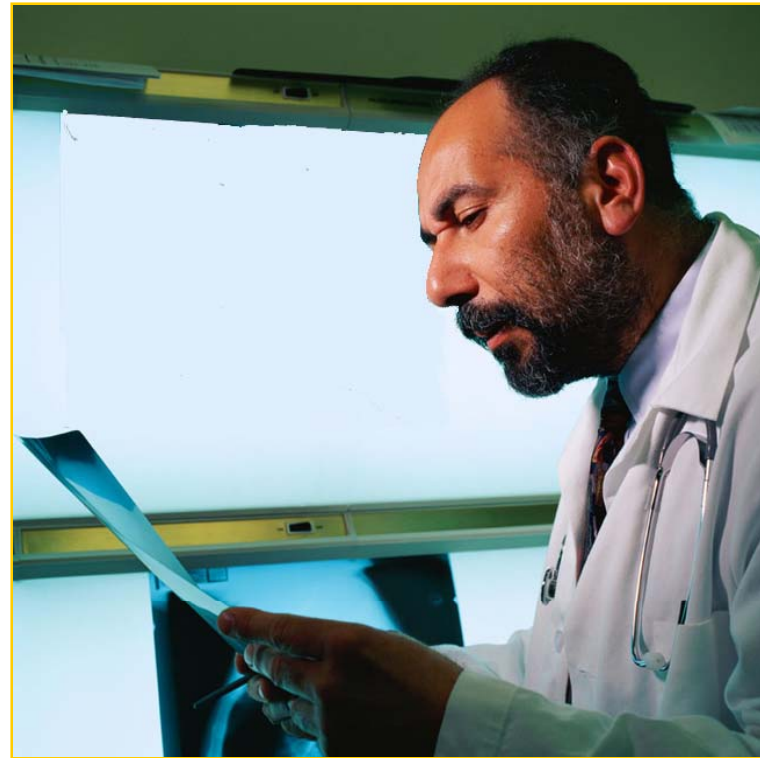
Routes of Entry

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



Chemical Exposure

- Dosage
- Acute effects
- Chronic effects



Hazard Communication Goals

- Right to know and chemical hazards
- PPE, first aid, and spills/leaks
- Labels and MSDSs
- Quiz

PPE

- 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



Hazard Communication **Goals**

- Right to know and chemical hazards
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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

- National Fire Protection Association = NFPA
- Blue = Health
- Red = Flammability
- Yellow = Reactivity
- White = Other hazards or special handling
Scale: 0 (No Hazard) to 4 (Extreme Hazard)



MSDS

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

Material Safety Data Sheet		U.S. Department of Labor	
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.		Occupational Safety and Health Administration (Non-Mandatory Form) Form Approved OMB No. 1218-0072	
IDENTITY (As Used on Label and List)		Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.	
Manufacturer's Name		Emergency Telephone Number	
Address (Number, Street, City, State, and ZIP Code)		Telephone Number for Information	
		Date Prepared	
		Signature of Preparer (optional)	
Hazardous Ingredients/Identity Information			
Hazardous Components (Specify: Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended % (optional)
Physical/Chemical Characteristics			
Boiling Point		Specific Gravity (50°/20°)	
Vapor Pressure (mm Hg)		Melting Point	
Vapor Density (AIR = 1)		Expansion Rate (Weight/Volume = 1)	
Density in Water			
Appearance and Odor			
Fire and Explosion Hazard Data			
Flash Point (Method Used)	Flammable Limits	LDL	UCL
Extinguishing Media			
Special Fire Fighting Considerations			
Unusual Fire and Explosion Hazards			

MSDS (cont.)

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

MSDS (cont.)

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

MSDS (cont.)

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



Hazard Communication Goals

- Right to know and chemical hazards
- PPE, first aid, and spills/leaks
- Labels and MSDSs
- 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 PPE
- Practice sensible, safe work habits
- Learn emergency procedures

Quiz

1. Chemical manufacturers must label containers and provide _____.
2. Employers should keep MSDSs 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: _____, _____, and _____.
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 up immediately. True or False

Quiz Answers

1. MSDSs 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 by which 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. Typical first aid for chemicals splashed in the eyes includes flushing the eyes for 15 minutes.
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.