Applicable Regulations: 29 CFR 1910.1200

Presented By Scott Kretschmer

1. OSHA Requires a Material Safety Data Sheet (MSDS) for Every Chemical and Hazardous Substance in the Workplace
- Chemical manufacturers must prepare them and provide them to users.
- Employers must have an easily available MSDS for each workplace chemical.

2. MSDS Hazard and Protection Information Is a Guide to Working Safely With the Chemical
- Before starting any job with a chemical, read the MSDS and follow its precautions.

3. Identification Data Tells What You're Working With
- Chemical name, hazardous ingredients and date MSDS was prepared
- Worker exposure limits, such as OSHA's Permissible Exposure Limit (PEL)
- Manufacturer/supplier name, address, emergency phone number

4. Physical and Chemical Changes Can Affect the Type and Degree of Hazard
- Normal appearance and odor: Any change could mean greater risk.
- Boiling point/melting point: Temperature at which the chemical changes from liquid to breathable gas or from solid to liquid-changing the hazard and needed protections
- Vapor pressure/vapor density/evaporation rate; Rate and ease with which the chemical evaporates or rises in air, which can increase the risk of inhaling the chemical
- Solubility in water/specific gravity: The chemical's ability to dissolve, sink, or float in water

5. The MSDS Identifies Fire and Explosion Risk Factors and Protections
- Flash point: Lowest temperature at which an ignition source (e.g., a spark) could make the substance's vapors catch fire

-The lower the number, the greater the chance of ignition.

- Flammable and explosive limits: Higher and lower concentrations of vapor in the air that will catch fire or explode if they contact an ignition source
- Firefighting: What material to use (water, foam, etc.) to put out a fire containing this substance

6. Reactivity Data Tell How the Chemical Reacts With Other Substances

Contact with air, heat, water, or another specific chemical could cause fire or explosion, or release flammable or toxic gases.
- Stability/instability: How well the chemical resists change or disintegration and what situations make it less stable
- Incompatibility: What substances (including air or water) may cause a dangerous reaction if chemical is exposed to them during use or storage
- Hazardous decomposition/byproducts or polymerization: The kind of hazardous products or reactions that could result if the chemical breaks down or reacts

7. Health Hazards Explain the Potential Results of Worker Exposure
- How the chemical enters the body: Inhaling, swallowing, skin or eye contact
- Type of health effects: Acute (develop right after exposure, like skin burns) or chronic (develop over time, e.g., cancer)
- Signs or symptoms of exposure: Headache, rashes, dizziness, etc.
- Cancer-causing potential
- Health conditions exposure might make worse: Breathing or heart problems, etc.
- What to do if exposed: First aid measures to take while waiting for medical help.

8. Control Measures Include Ways to Handle the Substance Safely
- Usage precautions; Using ventilation, avoiding heat, practicing good hygiene etc.
- Emergency response: What to do if there's a spill, leak, or accidental release
- Personal protective equipment (PPE): What to use to prevent exposure (type of respirator, gloves, eye protection, protective clothing)

BEFORE STARTING ANY JOB WITH A CHEMICAL,
CHECK ITS MATERIAL SAFETY DATA SHEET (MSDS TO LEARN)

PHYSICAL AND CHEMICAL CHANGES AFFECTING THE HAZARD
- Normal appearance and odor
- Temperature-boiling point or melting point-at which its form changes
- How fast or easily it evaporates and rises in air (vapor pressure, vapor density, evaporation rate)
- If it dissolves, sinks or floats in water (solubility in water, specific gravity)

FIRE AND EXPLOSION RISKS
- Lowest temperature at which vapors catch fire (flash point)
- Highest and lowest vapor concentrations that can catch fire or explode (flammable and explosive limits)
- Firefighting instructions •

REACTIVITY RISKS
- Chance of change or disintegration (stability, instability)
- Dangerous reactions to air, water, or specific chemicals (incompatibility)
- Breakdown or reactivity results (decomposition/byproducts)

EXPOSURE HEALTH RISKS
- Hazards and symptoms of inhaling, swallowing, skin, or eye contact
- Fast (acute) or gradual (chronic) appearance of health problems
- Cancer hazard
- Health conditions exposure could make worse
- First aid until medical help arrives

PRECAUTIONS TO REDUCE RISKS
- Controls such as ventilation and hygiene
- Respirators, gloves, or other personal protective equipment (PPE)
- Handling spills, leaks, or accidental release

Any questions or help with MSDSs call Scott Kretschmer @ shop 970 593-5683 or Cell 970 567-2609