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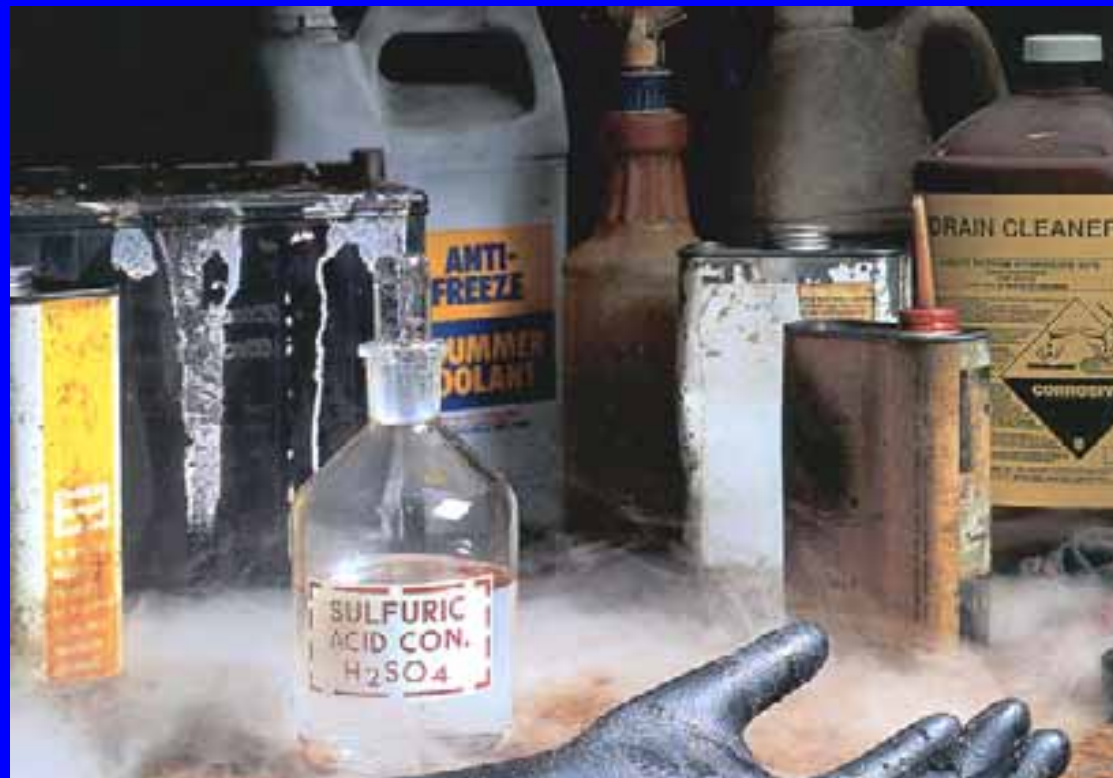
Safety Specialist
Authorized OSHA Instructor
ISO Auditor
Licensed Fire and Explosion Investigator
AHA and RC First Aid / CPR / AED Instructor
Certified State of Illinois Firefighter / First Responder Medic

Industrial safety experience:

Plastic film manufacturing, sheet and blown film extrusion (BOPP, HDPE)
Plastic container manufacturing, bottle blow and reheat blow molding (PET)
Heavy industrial operations, train locomotive manufacturing



Hazard Communication



Introduction



About 32 million workers work with and are potentially exposed to one or more chemical hazards



There are approximately 650,000 existing chemical products, and hundreds of new ones being introduced annually



Chemical exposure may cause or contribute to many serious health effects such as heart ailments, central nervous system damage, kidney and lung damage, sterility, cancer, burns, and rashes



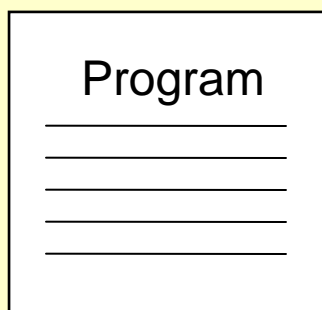
Some chemicals may also be safety hazards and have the potential to cause fires and explosions and other serious accidents

Purpose of OSHA's Hazard

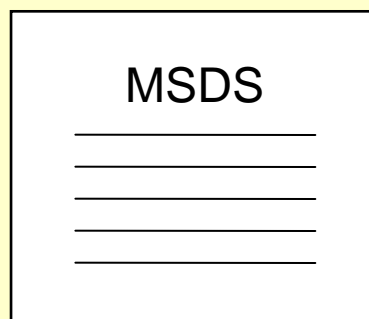
Communication Standard (29CFR 1910.1200)

To ensure that employers and employees know about work hazards and how to protect themselves so that the incidence of illnesses and injuries due to hazardous chemicals is reduced.

Hazard Communication Program



Material Safety Data Sheet



Container Labeling



Who is covered?

OSHA's Hazard Communication (HazCom) standard applies to general industry, shipyard, marine terminals, long shoring and construction employment and covers chemical manufacturers, importers, employers, and employees exposed to chemical hazards.



OSHA Most Frequently Cited Serious Violations – FY 2005

Subpart Z - Toxic & Hazardous Substances (1910.1000 - 1450)



Chemical Manufacturers & Distributors

The Hazard Communication Standard (HSC) is different from other OSHA standards in that it incorporates a downstream flow of information which places the primary responsibility of information on the chemical manufacturer.

- Determine the hazards of each product
- Communicate hazard information
- Disclose product composition / makeup
- Define safe product handling requirements
- Provide for 24 / 7 product service information

Employer Responsibilities



Implement a written HazCom program



Communicate hazard information to employees through formal training programs



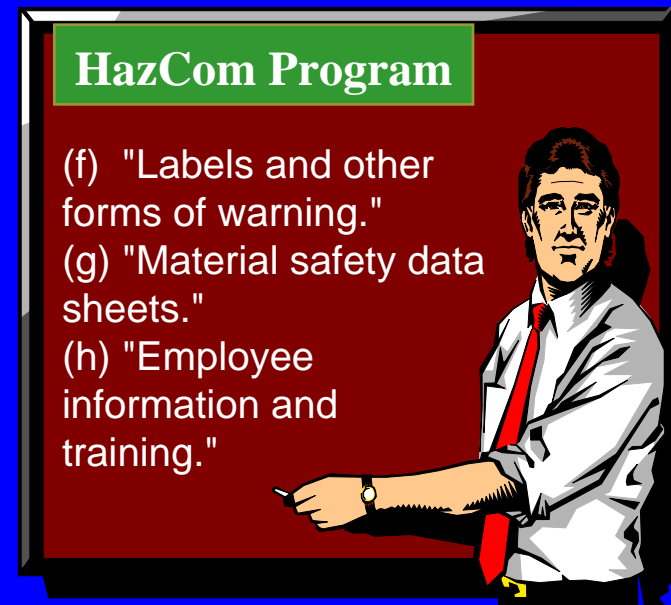
Obtain Material Safety Data Sheets (MSDSs) for each hazardous chemical



Identify and label chemicals in their workplaces

Why is a written program required?

- ☑ Ensures that all employers receive the information they need to inform, train and protect employees
- ☑ Provides reporting, control and accountability structure to maintain the program



Written HazCom Program Requirements



Defines how chemicals are to be reviewed and approved or denied for use



Defines when and how employees are informed and trained on safe handling precautions



Ensures MSDS's are obtained and made available for employee review



Defines how containers are to be identified / labeled

Chemical Users / Employers

The Hazard Communication Standard (HSC) leaves it to the user / employer to maintain and follow the guidelines provided by the manufacturer, not OSHA. The responsibilities common to all end users include,

- Decide to allow use, or not, thru a defined process
- Maintain chemical identification, during product usage
- Provide PPE to a level at or above defined guidelines
- Instruct employees on safe handling precautions

Chemical Users / Employers (cont')

The Hazard Communication Standard (HSC) leaves it to the user / employer to maintain and follow the guidelines provided by the manufacturer, not OSHA. The responsibilities common to all end users include,

- Inform employees of workplace exposures
- Provide employees and inspection / emergency response personnel with ready access to chemical information
- Control use of chemicals, as defined by guidelines
- Maintain storage of chemicals, as defined by guidelines

Chemical Users / Employers (cont')

The Hazard Communication Standard (HSC) leaves it to the user / employer to maintain and follow the guidelines provided by the manufacturer, not OSHA. The responsibilities common to all end users include,

- Dispose of chemicals, as defined by guidelines
- Maintain a record of disposal

Chemical Review Process

- Decide to allow use, or not, thru a defined process



Single individual at a site level using hard copy request forms



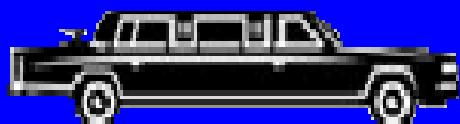
Site review board comprised of several managers using a computer database with authority level check offs

Chemical Identification

- ☑ Maintain chemical identification, during product usage



Limiting containers to usage size with original supplier labeling



Use of nationally recognized chemical labeling
NFPA diamond and or HMIS rectangle for larger
volume containers (drums) and smaller transfer
containers (bottles / cans)

Personal Protective Equipment (PPE)

- Provide PPE to a level at or above defined guidelines



Using MSDS defined guidelines provide required PPE in areas of usage (Eye, Respiratory, Contact protection)



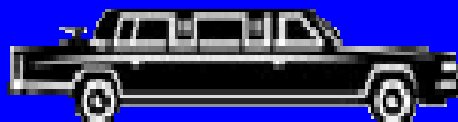
Using MSDS defined guidelines issue personal PPE to employees at levels above those required (Eye, Respiratory, Contact protection)

Employee Information / Training

- ✓ Instruct employees on safe handling precautions
- ✓ Inform employees of workplace exposures
- ✓ Provide employees and inspection / emergency response personnel with ready access to chemical information



Compile hardcopies of MSDS into a binder and instruct employees to review



Enter MSDS into a computer database and train employees on database searching, information retrieval

Control Chemical Use

- ✓ Control use of chemicals, as defined by guidelines
- ✓ Maintain storage of chemicals, as defined by guidelines



Establish inventoried chemical supply areas



Establish a restricted access chemical supply room with Log In/Out inventory controls (Hardcopy and or computer database)

Chemical Disposal

- ✓ Dispose of chemicals, as defined by guidelines
- ✓ Maintain a record of disposal



Provide disposal containers and establish waste removal protocols



Contract registered outside waste removal services to provide containers and site remove. Require disposal document

What training is needed to protect workers?

- ✓ Explanation of the HazCom program
- ✓ Hazards of chemicals
- ✓ Protective measures such as engineering controls, work practices, and the use of PPE
- ✓ How to report and respond to chemical spills



Material Safety Data Sheets

✓ If no MSDS has been received for a hazardous chemical, employer must contact the supplier, manufacturer, or importer to obtain one and maintain a record of the contact

✓ MSDSs have no prescribed format and can be displayed in hard copy or electronic format

Material Safety Data Sheet
May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. Standard must be
revised for specific requirements.

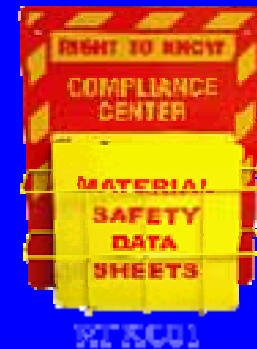
U.S. Department of Labor
Occupational Safety and Health Administration
Hazard-Warning Labels
Form Approved
OSHA No. 1224-0012

Section 1
Manufacturer's Name
Address (Street, Box, City, State, and ZIP Code)
Telephone Number
E-mail Address
Supplier's Name
Address (Street, Box, City, State, and ZIP Code)
Telephone Number
E-mail Address

Section 2 - Hazardous Ingredients/Identity Information
Hazardous Components (Health, Physical, Reactivity, Corrosive, Irritant, Other Haz.)
CAS No. OSHA H.S.P. Other Code
Hazardous Materials

Section 3 - Physical/Chemical Characteristics
Boiling Point
Melting Point (°F/°C)
Vapor Pressure (psia/kPa)
Vapor Density (air = 1)
Solubility in Water
Specific Gravity

Section 4 - Fire and Explosion Hazard Data
Flash Point (Celsius/Fahrenheit)
Flammable Limits (LFL, UFL)
Explosion Index
Special Fire Fighting Considerations
Unstable Under Conditions



How must chemicals be labeled?

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

- ☑ Identity of the chemical
- ☑ Appropriate hazard warnings
- ☑ The hazard warning can be any type of message, picture, or symbol that provides information on the hazards
- ☑ Labels must be legible, in English (plus other languages, if desired), and prominently displayed



What information must be provided to Employees?

Employees must be informed of:



The HazCom standard and its requirements



Operations in their work areas where hazardous chemicals are present



Location and availability of procedures, communication programs, lists of hazardous chemicals, and the required MSDSs

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 are exposed to when working.

Employees also need to know what protective measures are available to prevent adverse effects from occurring.