



Hazard Communication

- *29 CFR 1910.1200*



Objectives

29 CFR 1910.1200

- We will cover:
 - General use of hazard communication in the workplace
 - Role management and employees play in complying with standard
 - General requirements and assessment of hazards
 - Requirements and guidelines for an effective written program



Main Provisions of the Standard

- Purpose
 - Scope And Application
 - Definitions
 - Hazard Determination
 - Written Program
 - Labeling
 - Material Safety Data Sheets
 - Training
 - Trade Secrets
-



Purpose

1910.1200(a)

- Ensure hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees



Scope and Application

1910.1200(b)(1)

- Requires chemical manufacturers or importers to assess the hazards of chemicals which they produce or import
- Requires distributors to transmit the required information to employers



Scope and Application

1910.1200(b)(1)

- Requires employers to provide information to their employees about the hazardous chemicals to which they are exposed by the following means:
 - Hazard communication (HazCom) program
 - Labels and other forms of warning
 - Material safety data sheets (MSDS)
 - Information and training



Scope and Application

1910.1200(b)(2)

- Applies to chemicals known to be present in the workplace
- Employees that may have a potential for exposure
 - Under normal conditions, **or**
 - Foreseeable emergency



Scope and Application

1910.1200(b)(3)

- Application for laboratories only
 - Labels are not to be removed or defaced
 - Maintain MSDS for each chemical
 - MSDS should be readily available
 - Provide information and training
 - » Except location and availability of HazCom program

(cont...)

Scope and Application

1910.1200(b)(3)

- Application for laboratories only
 - A laboratory that ships chemicals is considered to be a distributor or manufacturer and must ensure that containers are labeled prior to shipment and provide MSDS to other distributor(s) or employer(s).



Scope and Application

1910.1200(b)(4)

- Application for work operations where chemicals are handled only in sealed containers
 - Labels not to be removed or defaced
 - Maintain MSDS for each chemical
 - MSDS should be readily available
 - Provide information and training
 - » Except location and availability of HazCom program
 - » Trained to protect themselves in the event of a spill or leak
-

Scope and Application

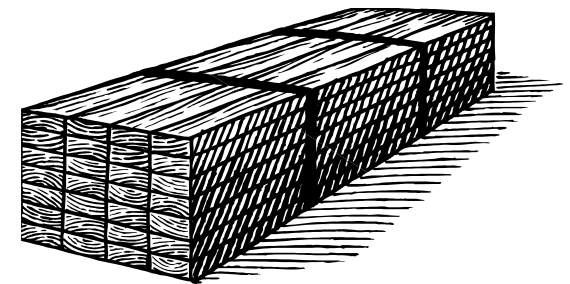
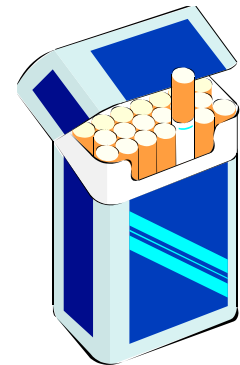
1910.1200(b)(5)

- Exemptions for labeling
 - Pesticides (Federal insecticide, fungicide, and rodenticide Act 7 U.S.C. 136)
 - Food, food additive, color additive (FDA 21 U.S.C. 301)
 - Cosmetic, medical or vet device (FDA 21 U.S.C. 301)
 - Distilled spirits (Federal Alcohol Administration Act 21 U.S.C. 201)
 - Consumer products (Consumer Product Safety Act 15 U.S.C. 2501)
 - Agricultural or vegetable seed (Federal Seed Act 7 U.S.C. 1551)
-

Scope and Application

1910.1200(b)(6)

- Does not apply to:
 - Hazardous wastes & substances
 - Tobacco or tobacco products
 - Wood or wood products
 - Articles as defined in the standard
 - Food or alcoholic beverages
 - Drugs as defined by 21 U.S.C. 301



(cont...)

Scope and Application

1910.1200(b)(6)

- Does not apply to:
 - Cosmetics for retail sale
 - Consumer products
 - Nuisance particulates
 - Ionizing and nonionizing radiation
 - Biological hazards



Key Elements of HazCom

1910.1200

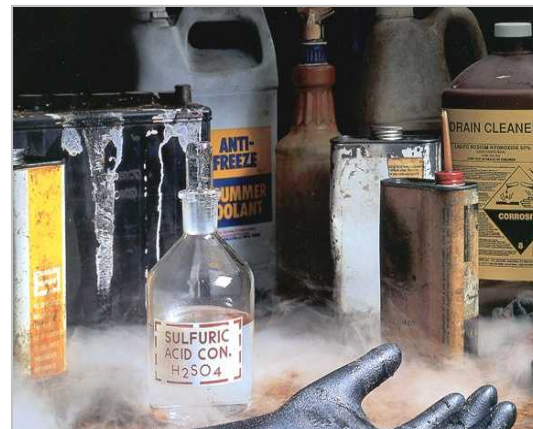
- Hazard determination
- Written program
- Labeling
- MSDS
- Employee training



Definitions

1910.1200(c)

- “Chemical”
 - Any element, chemical compound or mixture of elements and/or compounds
- “Hazardous chemical”
 - Any chemical which is a physical hazard or a health hazard



Definitions

1910.1200(c)

- “Physical hazard”
 - A chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, organic peroxide, oxidizer, pyrophoric, unstable, reactive or water-reactive



Definitions

1910.1200(c)

- Types of physical hazards
 - Flammable/combustible liquid
 - Compressed gas
 - Organic peroxide
 - Oxidizer
 - Explosive
 - Unstable
 - Pyrophoric
 - Reactive



Pyrophoric white phosphorus at
Lawrence Livermore Laboratory

Definitions

1910.1200(c)

- "Health hazard"
 - A chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees



Definitions

1910.1200(c)

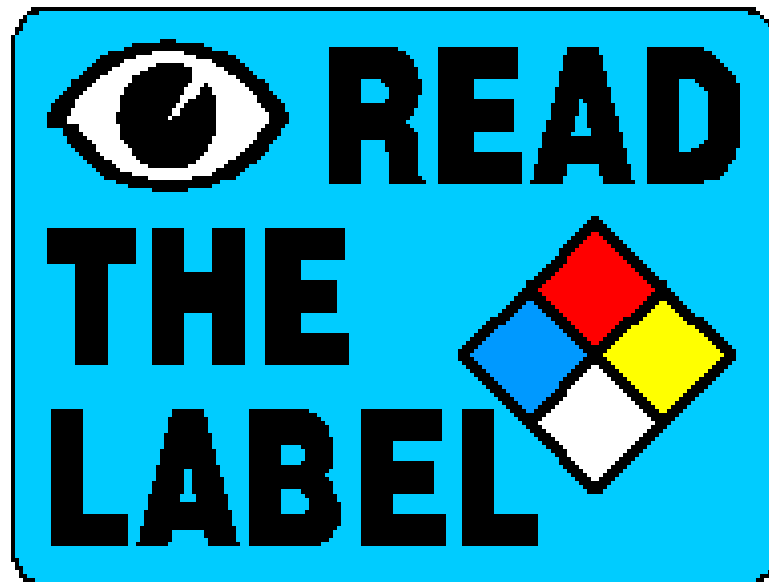
- Examples of health hazards
 - Allergens
 - Carcinogens
 - Dioxins
 - Heavy metals
 - Mutagens



Definitions

1910.1200(c)

- “Label” means any written, printed or graphic material displayed on or affixed to containers of hazardous chemicals.



Definitions

1910.1200(c)

- “Material Safety Data Sheet”
 - Written or printed material concerning a hazardous chemical which is prepared in accordance with the standard

4/05/05

MATERIAL SAFETY DATA SHEET

SECTION I: IDENTIFICATION

Manufacturer: FIREFREEZE Worldwide, Inc. **Distributor:** Cold Fire Forestry Division
Address: 272 Route 46 East, Rockaway, NJ 07866 **Address:** 70-B West Main Street
Telephone: (973) 627-0722 **Fax:** (973) 627-2982 **Address:** Babylon, NY 11702
Email: info@firefreeze.com **Tel:** 631-661-1330 **Fax:** 631-661-4167
Date Prepared: March 15, 2005 **Formulation #:** JG302 **Email:** info@coldfiredivision.com
Trade Name: Cold Fire 302
Product: Class A:B:D fire suppressing agent

SECTION II: INGREDIENTS AND HAZARD CLASSIFICATION

Components are classified trade secret. No components are believed to be hazardous or are listed in the NIOSH Recommendations for Occupational Safety and Health Standards, 1988, or are listed as hazardous by SARA, CERLA, or RCRA. No OSHA PEL's are established for any of the other ingredients.

SECTION III: PHYSICAL /CHEMICAL CHARACTERISTICS

Boiling Point: 212°F. **Vapor Pressure (mm Hg):** Same as water.
Solubility in Water: 100% **Specific Gravity:** 1.02@ 60°F.
pH: 6.15 (concentrate) Neutral when diluted.
Appearance and Odor: Clear liquid, fresh scent.

SECTION IV: FIRE AND EXPLOSION DATA

Flash Point: Not Applicable **Flammable Limits:** Non-Flammable
LEL: Not Applicable. **UEL:** Not Applicable.
Extinguishing Media: Not Applicable.
Special Fire Fighting Procedures: None.
Unusual Fire and Explosion Hazards: None.

SECTION V: REACTIVITY DATA

Stability: Stable. **Incompatibility:** None.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.
Hazardous Polymerization: Will not occur.

SECTION VI: HEALTH HAZARD DATA

Exposure Limits
OSHA PEL: Not established. **ACGIH TLV:** Not established.

Routes of Entry:
Inhalation: Yes **Skin:** Yes **Ingestion:** Yes

Sign and Symptoms of Exposure:
Skin: Negligible hazard. Not a primary skin irritant. Liquid is neutral with pH 7.5. Dermal irritation testing for 72 hours on albino rabbits showed no erythema and no edema.
Eyes: Not considered to be a primary ocular irritant.
Inhalation: Negligible.
Ingestion: Not considered to be orally toxic. Do not ingest.

First Aid:
Eyes: Immediately flush eyes with water for 1 minute.
Skin: Rinse with water.
Inhalation: Negligible. Remove to fresh air.
Ingestion: Drink water.

Carcinogenicity:
NTP: No **IARC:** No **OSHA Regulated:** NO

Hazard Determination

1910.1200(d)

- Chemical manufacturers or importers shall:
 - Evaluate their chemicals to determine if they are hazardous
 - Review and consider any scientific evidence about the hazards of their chemicals
 - » Refer to Appendix “A” and “B” in the standard for covered health hazards and evaluation criteria.



Hazard Determination

1910.1200(d)

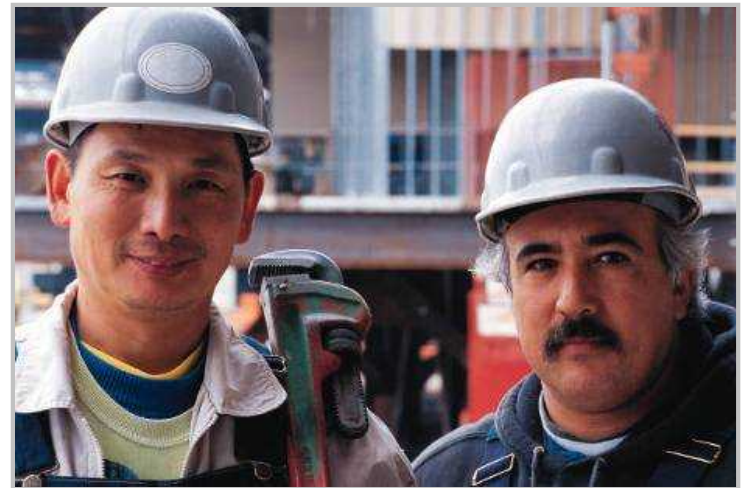
- Those that evaluate chemicals are responsible for the quality of test results.
- Test procedures will be in writing.
- Employers are not required to evaluate chemicals.



Written Program

1910.1200(e)(1) & (4)

- The employer shall have a **written** hazard communication program.
- It shall be available upon request to employees and/or their designated representative.



Written Program

1910.1200(e)

- Shall contain how the following will be met:
 - Labeling practices
 - Other forms of warning
 - Material safety data sheets
 - Information and training
 - List of chemicals

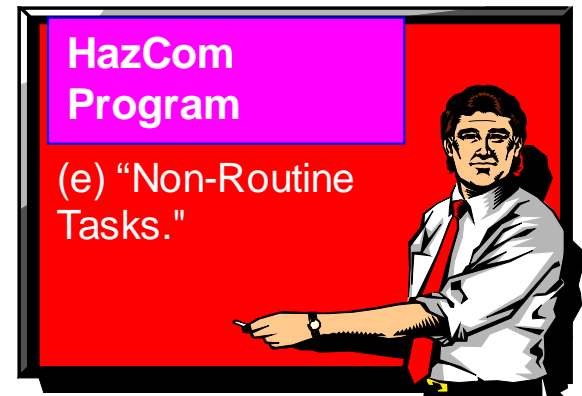
(cont...)



Written Program

1910.1200(e)(1)(ii)

- Shall also contain:
 - Methods used to inform employees of the hazards associated with non-routine tasks
 - » Example: cleaning a reactor vessel
 - Hazards associated with chemicals contained in unlabeled pipes in the workplace



Written Program

1910.1200(e)(2)

- Multi-employer workplaces
 - Methods used to inform other employer(s):
 - » MSDS access
 - » Precautionary measures during normal operating conditions and in foreseeable emergencies
 - » Labeling system



Written Program

1910.1200(e)(5)

- When employees travel between workplaces
 - HazCom program may be kept at a primary workplace facility.



Labeling

1910.1200(f)

- Shall be in English and prominently display
 - Chemical name
 - Appropriate hazard warnings
 - Name and address of manufacturer/
importer/responsible party



Labeling

1910.1200(f)

- Employers may add information for foreign language employees.



Labeling

1910.1200(f)(7)

- Labeling exemption
 - Portable containers which are intended for **immediate use** by the employee who performs the transfer of hazardous chemical from a labeled container
 - **Immediate use**
 - » Under the control of, **and**
 - » Used only by the employee, **and**
 - » Within the work shift of transfer



Material Safety Data Sheets

1910.1200(g)

- Chemical manufacturers and importers shall obtain or develop an MSDS.
- Employers shall have an MSDS in the workplace for each chemical they use.
- Must be in English



Material Safety Data Sheets

1910.1200(g)

- Paragraph (g) lists the information required to be in an MSDS:
 - Manufacturer and contact numbers
 - Chemical and common name
 - Physical and chemical characteristics
 - Physical and health hazards
 - Exposure levels
 - Safe handling and control measures
 - Emergency and first aid
 - Date of preparation of MSDS



Material Safety Data Sheets

1910.1200(g)

- Chemical manufacturers or importers shall ensure that distributors and employers are provided an appropriate MSDS with their initial shipment, **and**
 - With the first shipment after an MSDS is updated

The diagram illustrates the layout of a Material Safety Data Sheet (MSDS) form, divided into two columns: FRONT and BACK.

FRONT:

- MATERIAL SAFETY DATA SHEET** (Title)
- SECTION 1:** Identification (Name, Synonyms, etc.)
- SECTION 2: HAZARDOUS INGREDIENTS IDENTIFICATION** (Hazardous components)
- SECTION 3: PHYSICAL CHEMICAL CHARACTERISTICS** (Appearance, Odor, Boiling Point, etc.)
- SECTION 4: FIRE AND EXPLOSION HAZARD DATA** (Flammability, Flash Point, etc.)

BACK:

- SECTION 5: REACTIVITY DATA** (Stability, Incompatibility, etc.)
- SECTION 6: HEALTH HAZARD DATA** (Toxicity, Irritation, etc.)
- SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE** (Personal Protection, PPE, etc.)
- SECTION 8: CONTROL MEASURES** (Engineering Controls, etc.)

Material Safety Data Sheets

1910.1200(g)

- MSDS access for employees
 - Readily accessible, *and*
 - During work shift
- Electronic and other alternatives are acceptable
 - No barriers to immediate employee access
- When employees travel
 - May be kept at primary workplace



Information and Training

1910.1200(h)

- Provided to employees upon:
 - Initial employment
 - When chemicals change
 - New hazards are introduced into the workplace



- Information

- Requirements of this section
 - Operations in their work area where hazardous chemicals are present
 - Location and availability:
 - Written hazard communication program
 - List(s) of hazardous chemicals
 - Material safety data sheets
-

Information and Training

1910.1200(h)

- Training

- Methods and observations to detect presence or release of chemicals
- Physical and health hazards
- Measures to protect themselves



(cont...)



Information and Training

1910.1200(h)

- Training

- Details of the hazard communication program

- including:

- » An explanation of the labeling system

- » Material safety data sheets

- » How employees can obtain and use the appropriate hazard information

- » Non-routine tasks



Trade Secrets

1910.1200(i)

- Chemical manufacturers, importers, or employers may withhold specific information from the MSDS.
 - They must be able to support that the information withheld is a trade secret.





Trade Secrets

1910.1200(i)

- Under the **NC Right to Know law**, hazard information on chemicals deemed as a trade secret are to be provided to the local Fire Chief who shall hold the information in confidence.



Trade Secrets

1910.1200(i)(2)

- Emergencies

- Where a treating physician or nurse determines that a medical emergency exists, the chemical identity of the trade secret must be disclosed.



Trade Secrets

1910.1200(i)(3)

- Non-emergencies
 - Disclose to health professional if:
 - » Requested in writing
 - » Used to assess an employee's exposure
 - » Provide medical treatment
 - » Design engineering controls



Trade Secrets

1910.1200(i)(3)

- Non-emergencies
 - Disclose to health professional if:
 - » Assessing hazards
 - » Conducting medical surveillance
 - » Assessing PPE
 - » Conducting medical studies





Summary

- Purpose
- Scope and Application
- Definition
- Hazard Determination
- Written Program
- Labeling
- Material Safety Data Sheets
- Training
- Trade Secrets



Thank You For Attending!

Final Questions?
