



PDHonline Course C353 (4 PDH)

**OSHA Required Training – Chemical
Hazard Communications – 29 CFR
1910.1200**

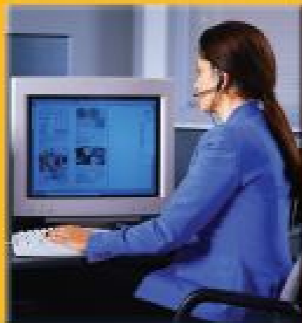
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OSHA Required Training

**Chemical Hazard
Communication**

29 CFR 1200

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CHEMICAL HAZARD COMMUNICATIONS
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1.0 OSHA Overview

The Occupational Safety and Health Administration (OSHA) was created by the United States Congress in 1971 as a federal agency in the Department of Labor. OSHA's mission is to assure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. Since its inception, OSHA has helped to cut workplace fatalities by more than 60 percent and occupational injury and illness rates by 40 percent. At the same time, U.S. employment has doubled from 56 million workers at 3.5 million worksites to more than 115 million workers at 7.2 million sites.

1.1 Employer Responsibilities

OSHA has stipulated specific responsibilities for employers which include, but not are limited to, the following:

- Furnish employees a place of employment free from recognized hazards;
- Comply with the occupational safety and health standards issued under the OSH Act;
- Provide required employee training, as applicable to the workplace; and,
- Correct any workplace hazards documented and verified by OSHA and certify that these hazards have been reduced or eliminated.

1.2 Employee Rights and Responsibilities

OSHA has also regulated rights and responsibilities for employees which include, but are not limited to, the following:

- The right to notify your employer or OSHA, even anonymously, about workplace hazards;
- The right to request an OSHA inspection if you believe that there are unhealthy or unsafe conditions in your workplace. You or your representative may participate in the inspection;
- The right to file a complaint with OSHA within 30-days of retaliation or discrimination by your employer for making safety and/or health complaints or for exercising your rights under the OSH Act;

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- The right to see OSHA citations issued to our employer. Your employer must post the citations at or near the site of the alleged violations;
- The right to copies of your medical records and records of your exposure to toxic and harmful substances or conditions.
- Employees must comply with all occupational safety and health standards issued under the OSH Act that apply to their own actions and conduct on the job.

2.0 OSHA Required Training – Chemical Hazard Communications

OSHA regulations 29 CFR 1910.1200 (h) (1), (2) (i) through (iii), and (3) (i) through (iv), document the training requirements for chemical hazard communications. These excerpts are provided below:

(h) *Employee Information and Training.* (1) Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and material safety data sheets.

(2) *Information.* Employees shall be informed of:

- (i) The requirements of this section;
- (ii) Any operations in their work area where hazardous chemicals are present; and,
- (iii) The location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and material safety data sheets required by this section.

(3) *Training.* Employee training shall include at least:

- (i) Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);

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- (ii) The physical and health hazards of the chemicals in the work area;
- (iii) The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and,
- (iv) The details of the hazard communication program developed by the employer, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

It should be noted that infractions of 29 CFR 1910.1200 regulations frequently rate in the top ten OSHA issued violations for recent years. Examples of these violations include the following:

- No / lacking written Hazard Communication Program;
- Hazardous chemicals present, but no / lacking applicable information and training;
- No / lacking training on new chemical hazards in the workplace; and,
- No / lacking material safety data sheets (MSDS) available in the workplace.

3.0 The Hazard Communication Standard

As part of our everyday work and non-work activities, we come in contact with various chemicals. Some of these chemicals can cause injury, illness, or even death if not handled properly. In the past there was no guarantee that workers would be told about the chemical hazards they face. To help assure your safety and health in handling chemicals in the workplace, OSHA established the Hazard Communication Standard (Title 29 CFR 1910.1200) to convey what potential hazards exists. Specifically, employees have a “Right to Know” about the hazardous materials used in the workplace and the potential effects of these materials upon health and safety.

The Hazard Communication Standard is different from other OSHA health rules because it covers all hazardous chemicals. The rule also incorporates a “downstream flow of information,” which means that producers of chemicals have the primary responsibility for generating and disseminating information, whereas users of chemicals must obtain the information and transmit it to their own employees. In general, it works like this:

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Chemical Manufacturers / Importers

- Determine the hazards of each product

Chemical Manufacturers / Importers / Distributors

- Communicate the hazard information and associated protective measures downstream to customers through labels and Material Safety Data Sheets (MSDSs)

Employers

- Identify and list hazardous chemicals in their workplaces
- Obtain MSDSs and labels for each hazardous chemical, if not provided by the manufacturer, importer, or distributor
- Develop and implement a written hazard communication program, including labels, MSDSs, and employee training, on the list of chemicals, MSDSs and label information
- Communicate hazard information to their employees through labels, MSDSs, and formal training programs

Employees

- Be knowledgeable of hazardous chemicals in their workplace
- Be knowledgeable of MSDSs and labels for each hazardous chemical
- Be knowledgeable of the written hazard communications program
- Participate in chemical hazard communication training

The OSHA Hazard Communication Standard is composed of five key elements, as detailed below and in the following sections:

1. Materials Inventory - A list of the hazardous materials present in your work area.
2. Material Safety Data Sheets - A detailed description of each hazardous material listed in the Materials Inventory.
3. Labeling - Containers of hazardous materials must have labels which identify the material and warn of its potential hazard to employees.
4. Training - All employees must be trained to identify and work safely with hazardous materials.
5. Written Program - A written program must be developed which ties all of the above together and documents a company's Hazard Communication Program

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3.1 Materials Inventory

The standard requires a list of hazardous chemicals in the workplace as part of the written Hazard Communication Program. The list will eventually serve as an inventory of everything for which you must maintain an MSDS. At this point, however, preparing the list will help you complete the rest of the program since it will give you some idea of the scope of the program required for compliance in your facility.

The best way to prepare a comprehensive list is to survey the workplace. Purchasing records also may help, and certainly employers should establish procedures to ensure that in the future purchasing procedures result in MSDSs being received before using a material in the workplace.

The broadest possible perspective should be taken when doing the survey. Sometimes people think of “chemicals” as being only liquids in containers. The standard covers chemicals in all physical forms – liquids, solids, gases, vapors, fumes, and mists – whether they are “contained” or not. The hazardous nature of the chemical and the potential for exposure are the factors that determine whether a chemical is covered. If it’s not hazardous, it’s not covered. If there is no potential for exposure, (e.g., the chemical is inextricably bound and cannot be released), the rule does not cover the chemical.

3.2 Material Safety Data Sheets

The MSDS is a detailed information bulletin prepared by the manufacturer or importer of a chemical that describes the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first-aid procedures, and control measures.

Chemical manufacturers and importers must develop an MSDS for each hazardous chemical they produce or import, and must provide the MSDS automatically at the time of the initial shipment of a hazardous chemical to a downstream distributor or user. Distributors also must ensure that downstream employers are similarly provided an MSDS. All MSDS must be written in English. Employers must ensure that employees are knowledgeable about MSDS in the workplace.

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While there is no specific format for the MSDS under the rule, there are specific information requirements. In order to promote consistent presentation of information, OSHA recommends that MSDSs follow the 16-section format established by the American National Standards Institute (ANSI) standard for preparation of MSDSs (Z400.1). Most MSDSs include a majority of these informational components, as listed below:

1. Identification
2. Hazard(s) identification
3. Composition/information on ingredients
4. First-aid measures
5. Fire-fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls/personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information

There are certain terminologies and acronyms which are common to MSDSs. A thorough understanding of these will enhance understanding of a chemical's characteristics. A selection of these terms is provided below:

- Acid - substance with a pH value of <7
- Acute Effect - rapid adverse reaction to substance
- Base - substance with a pH value of >7
- Boiling point - the temperature at which a liquid bubbles and changes into vapor
- Caustic - substance with alkali / base properties
- Chronic Effect - very slow reaction to substance
- Corrosive - chemical causing tissue damage - acid or base
- Density - quantity (mass) of something per unit measure

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- Evaporation rate - the rate at which a liquid vaporizes as compared to standard (fast \geq 1, medium = 1, slow \leq 1)
- Flammable - substance which burns easily
- Flashpoint - minimum temperature at which a liquid gives off vapor in sufficient concentration to ignite
- Freezing point - the temperature at which a liquid changes into a solid
- Incompatible - materials which react dangerously by direct contact with each other
- LC50 - concentration of substance in air which kills 50% of test animals in a single exposure
- LD50 - amount of substance in air which kills 50% of test animals in a single exposure
- LEL - lower explosive limit - lowest concentration of vapor or gas which supports combustion
- Odor threshold - lowest concentration of substance's vapor, in air, that can be smelled
- Oxidizer - chemical that promotes combustion in other materials by providing oxygen or receiving electrons
- P.E.L. - permissible exposure limit - regulatory level for maximum contact, may be time limit or concentration
- pH - a measure of the acidity or basicity of a solution. It is defined as the cologarithm of the activity of dissolved hydrogen ions (H^+). Hydrogen ion activity coefficients cannot be measured experimentally, so they are based on theoretical calculations. The pH scale is not an absolute scale; it is relative to a set of standard solutions whose pH is established by international agreement. Pure water is said to be neutral.
- ppb - parts per billion (# / 1,000,000,000)
- ppm - parts per million (# / 1,000,000)
- Reactivity - chemical reaction with the release of energy, usually by increased temperature and/or pressure
- Solvent - substance in which other substances are dissolved, usually a liquid
- Specific gravity - weight of substance compared to equal volume of unit material
- T.L.V. - threshold limit value - maximum airborne concentration of substance that yields no adverse effect
- T.W.A. - time weighted average - average concentration of substance that a person can be exposed to during a time period (typically 8-hours) that yields no adverse effect
- U.E.L. - upper explosive limit - highest concentration of vapor or gas which supports combustion

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- Unstable - tending toward decomposition or other unwanted chemical change during normal handling
- Vapor pressure - pressure exerted by saturated vapor above its own liquid in a closed container

3.3 Chemical Labeling

The primary information to be obtained from an OSHA-required label is the identity for the material and appropriate hazard warnings. The identity is any term which appears on the label, the MSDS, and the list of chemicals, and thus links these three sources of information. The identity used by the supplier may be a common or trade name (“Black Magic Formula”), or a chemical name (1, 1, 1 - trichloroethane). The hazard warning is a brief statement, such as “flammable” or “causes lung damage”, and/or graphic noting the hazardous effects of the chemical. Examples of common warning graphics are depicted below. Labels frequently contain other information, such as precautionary measures like “do not use near open flame”, but this information is provided voluntarily and is not required by the rule. Labels must be legible and prominently displayed. There are no specific requirements for size or color or any specified test.



Biohazard



Carcinogen



Corrosive



Environmental hazard



Explosive



Flammable



Oxidizer



Radioactive

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3.3.1 Temporary Container Labels

Employers that are purchasing and using hazardous chemicals – rather than producing or distributing them - will primarily be concerned with ensuring that every purchased container is labeled. During workplace activities, it may be necessary to transfer some chemical(s) from larger labeled containers to smaller containers. If the transfer container is intended only for immediate use by the employee that made the transfer, then the transfer container is not required to be labeled. If however, the transfer container is intended for use by more employees than the individual who initially made the transfer, then the container must be fully labeled. Section 29 CFR 1200 (f) documents the requirements and exemptions for labels and other forms of warning. It would be prudent operating procedures to designate someone to be responsible for ensuring that the labels are maintained as required on the containers in your facility, and that newly purchased materials are checked for labels prior to use.

3.3.2 NFPA Chemical Hazard Labels

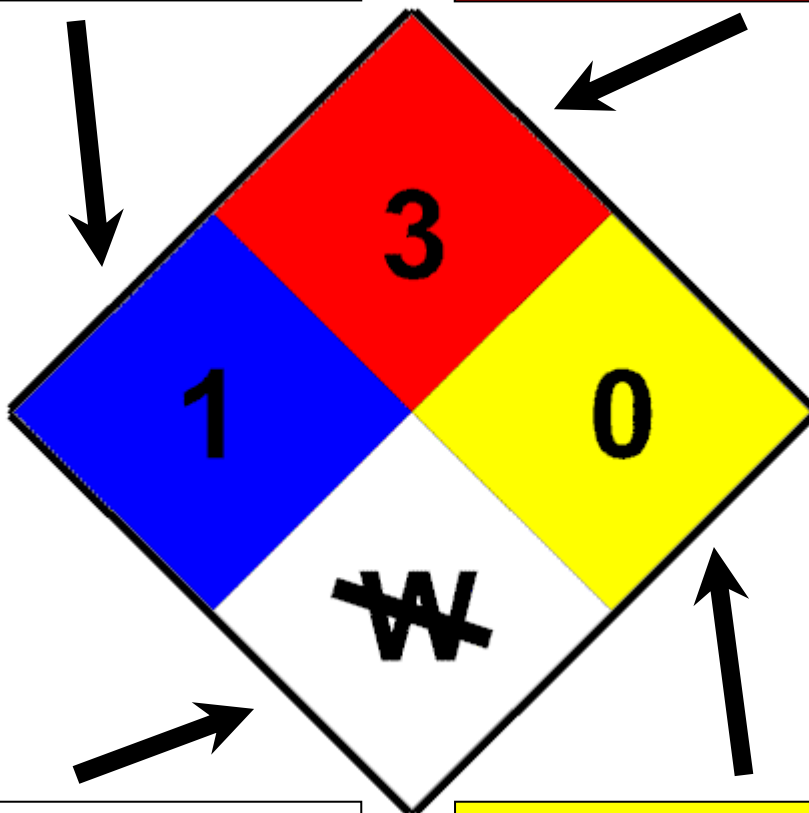
The National Fire Protection Association (NFPA) has developed a labeling system for indicating the health, flammability and reactivity hazards of chemicals pursuant to ANSI/NFPA 704. Each label is diamond shaped and contains four smaller color / numerical / symbol coded diamond zones. The four designated diamonds easily identify a chemical's hazard characteristics related to health, flammability, reactivity, and specific concerns. This system of identifying hazards associated with various materials was developed primarily for fire protection and emergency personnel but can be useful to anyone who needs to handle potentially hazardous material. As stated in NFPA 704, "This standard provides a simple system of readily recognizable and easily understood markings, which will give at a glance a general idea of the inherent hazards of any material and the order of severity of these hazards as they relate to fire prevention, exposure, and control". The figure on the following page depicts an example of a NFPA diamond label with interpretive notations.


While OSHA does not regulate the use of NFPA chemical hazard labels, it is a good idea to understand them. These labels commonly appear on chemical transport vehicles, chemical storage areas, and on some chemical container labels.

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<u>HEALTH HAZARD</u>	
4	- Deadly
3	- Extreme Danger
2	- Hazardous
1	- Slightly Hazardous
0	- Normal Material

<u>FIRE HAZARD</u>	
Flash Points	
4	- Below 73°F
3	- Below 100°F
2	- Below 200°F
1	- Below 300°F
0	- Will Not Burn



<u>SPECIFIC HAZARD</u>	
OXY	Oxidizer
ACID	Acid
ALK	Alkali
COR	Corrosive
W	Use NO WATER
	Radiation Hazard

<u>REACTIVITY</u>	
4	- May Detonate
3	- Shock and Heat May Detonate
2	- Violent Chemical
1	- Unstable if Heated
0	- Stable

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3.3.3 HMIS Chemical Hazard Labels

The Hazardous Materials Identification System (HMIS) is a numerical hazard rating that incorporates the use of labels with color-coded bars as well as training materials. It was developed by the National Paint & Coatings Association as a compliance aid for OSHA's Hazard Communication Standard. The HMIS color bar label is similar to the diamond label created by the NFPA. Before 2002 the diamond and the color bar labels both had sections colored blue, red, white, and yellow. After April 2002, with the release of HMIS III, yellow in the color bar (which stood for reactivity) was replaced by orange, standing for physical hazard. The diamond label is designed for emergencies when information about the effects of short, or acute, exposure is needed. The color bar label is not for emergencies and is used to convey broader health warning information. For a specific chemical, each color bar will list a number between 0 and 4 which represents the severity of the hazard – the lower the number, the lower the hazard rating.



HAZARD RATING

- 4 - Extreme**
- 3 - Serious**
- 2 - Moderate**
- 1 - Slight**
- 0 - Minimal**

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3.4 Hazard Communication Standard Training

Employers must establish a training and information program for employees who are exposed to hazardous chemicals in their work area at the time of initial assignment and whenever a new hazard is introduced into their work area. At a minimum, the discussion topics must include the following:

- The hazard communication standard and its requirements.
- The components of the hazard communication program in the employees' workplaces.
- Operations in work areas where hazardous chemicals are present.
- Where the employer will keep the written hazard evaluation procedures, communications program, lists of hazardous chemicals, and the required MSDS forms.

The employee training plan must consist of the following elements:

- How the hazard communication program is implemented in that workplace, how to read and interpret information on labels and the MSDS, and how employees can obtain and use the available hazard information.
- The hazards of the chemicals in the work area. (The hazards may be discussed by individual chemical or by hazard categories such as flammability.)
- Measures employees can take to protect themselves from the hazards.
- Specific procedures put into effect by the employer to provide protection such as engineering controls, work practices, and the use of personal protective equipment (PPE).
- Methods and observations—such as visual appearance or smell—workers can use to detect the presence of a hazardous chemical to which they may be exposed.

3.5 Hazard Communication Standard Written Plan

A written hazard communication program ensures that all employees receive the information they need to inform and train their employees properly and to design and put in place employee protection programs. It also provides necessary hazard information to employees, so they can participate in, and support, the protective measures in place at their workplaces. Employers therefore must develop, implement, and maintain at the workplace a written, comprehensive hazard communication

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program that includes provisions for container labeling, collection and availability of material safety data sheets, and an employee training program. It also must contain a list of the hazardous chemicals, the means the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with chemicals in unlabeled pipes. If the workplace has multiple employers onsite (for example, a construction site), the rule requires these employers to ensure that information regarding hazards and protective measures be made available to the other employers onsite, where appropriate. In addition, all covered employers must have a written hazard communication program to get hazard information to their employees through labels on containers, MSDSs, and training.

The written program does not have to be lengthy or complicated, and some employers may be able to rely on existing hazard communication programs to comply with the above requirements. The written program must be available to employees, their designated representatives, the Assistant Secretary of Labor for Occupational Safety and Health, and the Director of the National Institute for Occupational Safety and Health (NIOSH). A model plan for the Chemical Hazard Communication Standard is provided herein via OSHA document #3186.

Chemical Hazard Communication



U.S. Department of Labor
Occupational Safety and Health Administration

OSHA 3084
1998 (Revised)

This informational booklet is intended to provide a generic, non-exhaustive overview of a particular standards-related topic. This publication does not itself alter or determine compliance responsibilities, which are set forth in OSHA standards themselves and the *Occupational Safety and Health Act*. Moreover, because interpretations and enforcement policy may change over time, for additional guidance on OSHA compliance requirements, the reader should consult current administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts.

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Chemical Hazard Communication



U.S. Department of Labor
Alexis M. Herman, Secretary

Occupational Safety and Health Administration
Charles N. Jeffress, Assistant Secretary

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Under the provisions of the Hazard Communication Standard, employers are responsible for informing employees of the hazards and the identities of workplace chemicals to which they are exposed.

About 32 million workers work with and are potentially exposed to one or more chemical hazards. There are an estimated 650,000 existing chemical products, and hundreds of new ones being introduced annually. This poses a serious problem for exposed workers and their employers.

Chemical exposure may cause or contribute to many serious health effects such as heart ailments, central nervous system, 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.

Because of the seriousness of these safety and health problems, and because many employers and employees know little or nothing about them, the Occupational Safety and Health Administration (OSHA) issued the Hazard Communication Standard. The basic goal of the standard is to be sure employers and employees know about work hazards and how to protect themselves; this should help to reduce the incidence of chemical source illness and injuries.

The Hazard Communication Standard establishes uniform requirements to make sure that the hazards of all chemicals imported into, produced, or used in U.S. workplaces are evaluated, and that this hazard information is transmitted to affected employers and exposed employees.

Employers and employees covered by an OSHA-approved state safety and health plan should check with their state agency, which may be enforcing standards and other procedures “at least as effective as,” but not always identical to, federal requirements. See also pages 13 and 18 of this publication for more information on state plans.

Basically, the hazard communication standard is different from other OSHA health rules because it covers all hazardous chemicals. The rule also incorporates a “downstream flow of information,” which means that producers of chemicals have the primary responsibility for generating and disseminating information, whereas users of chemicals must obtain the information and transmit it to their own employees. In general, it works like this:

**Chemical
Manufacturers/
Importers**

- Determine the hazards of each product.

**Chemical
Manufacturers/
Importers/
Distributors**

- Communicate the hazard information and associated protective measures downstream to customers through labels and MSDSs.

Employers

- Identify and list hazardous chemicals in their workplaces.
- Obtain MSDSs and labels for each hazardous chemical, if not provided by the manufacturer, importer, or distributor.
- Develop and implement a written hazard communication program, including labels, MSDSs, and employee training, on the list of chemicals, MSDSs and label information.
- Communicate hazard information to their employees through labels, MSDSs, and formal training programs.

The quality of the hazard communication program depends on the adequacy and accuracy of the assessment of hazards in the workplace. Chemical manufacturers and importers are required to review available scientific evidence concerning the hazards of the chemicals they produce or import, and to report the information they find to their employees and to employers who distribute or use their products. Downstream employers can rely on the evaluations performed by the chemical manufacturers or importers to establish the hazards of the chemicals they use.

The chemical manufacturers, importers, and any employers who choose to evaluate hazards are responsible for the quality of the hazard determinations they perform. Each chemical must be evaluated for its potential to cause adverse health effects and its potential to pose physical hazards such as flammability. (Definitions of hazards covered are included in the standard, see 1910.1200(c).) Chemicals that are listed in one of the following sources are to be considered hazardous in all cases:

- *29 CFR 1910, Subpart Z, Toxic and Hazardous Substances*, Occupational Safety and Health Administration (OSHA), and
- *Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment*, American Conference of Governmental Industrial Hygienists (ACGIH).

In addition, chemicals that have been evaluated and found to be a suspect or confirmed carcinogen in the following sources must be reported as such:

- National Toxicology Program (NTP), *Annual Report on Carcinogens*,
- International Agency for Research on Cancer (IARC), *Monographs*, and
- Regulated by OSHA as a carcinogen.

A written hazard communication program ensures that all employers receive the information they need to inform and train their employees properly and to design and put in place employee protection programs. It also provides necessary hazard information to employees, so they can participate in, and support, the protective measures in place at their workplaces.

Employers therefore must develop, implement, and maintain at the workplace a written, comprehensive hazard communication program that includes provisions for container labeling, collection and availability of material safety data sheets, and an employee training program. It also must contain a list of the hazardous chemicals, the means the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with chemicals in unlabeled pipes. If the workplace has multiple employers onsite (for example, a construction site), the rule requires these employers to ensure that information regarding hazards and protective measures be made available to the other employers onsite, where appropriate. In addition, all covered employers must have a written hazard communication program to get hazard information to their employees through labels on containers, MSDSs, and training.

The written program does not have to be lengthy or complicated, and some employers may be able to rely on existing hazard communication programs to comply with the above requirements. The written program must be available to employees, their designated representatives, the Assistant Secretary of Labor for Occupational Safety and Health, and the Director of the National Institute for Occupational Safety and Health (NIOSH).

(Sample programs are available in the Compliance Directive CPL 2-2.38 D, Appendix E. Also, see *Hazard Communication—A Compliance Kit* (OSHA 3104) (a reference guide to step-by-step requirements for compliance with the OSHA standard.) The kit can be obtained from the Government Printing Office. (See **OSHA Related Publications** for ordering information.)

Chemical manufacturers and importers must convey the hazard information they learn from their evaluations to downstream employers by means of labels on containers and material safety data sheets (MSDSs).

Also, chemical manufacturers, importers, and distributors must be sure that containers of hazardous chemicals leaving the workplace are labeled, tagged, or marked with the identity of the chemical, appropriate hazard warnings, and the name and address of the manufacturer or other responsible party.

In the workplace, each container must be labeled, tagged, or marked with the identity of hazardous chemicals contained therein, and must show hazard warnings appropriate for employee protection. The hazard warning can be any type of message, words, pictures, or symbols that provide at least general information regarding the hazards of the chemical(s) in the container and the targeted organs affected, if applicable. Labels must be legible, in English (plus other languages, if desired), and prominently displayed.

Exemptions to the requirement for in-plant individual container labels are as follows:

- Employers can post signs or placards that convey the hazard information if there are a number of stationary containers within a work area that have similar contents and hazards.
- Employers can substitute various types of standard operating procedures, process sheets, batch tickets, blend tickets, and similar written materials for container labels on stationary process equipment if they contain the same information and the written materials are readily accessible to employees in the work area.
- Employers are not required to label portable containers into which hazardous chemicals are transferred from labeled containers and that are intended only for the immediate use of the employee who makes the transfer.
- Employers are not required to label pipes or piping systems.

The MSDS is a detailed information bulletin prepared by the manufacturer or importer of a chemical that describes the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first-aid procedures, and control measures.

Chemical manufacturers and importers must develop an MSDS for each hazardous chemical they produce or import, and must provide the MSDS automatically at the time of the initial shipment of a hazardous chemical to a downstream distributor or user. Distributors also must ensure that downstream employers are similarly provided an MSDS.

Each MSDS must be in English and include information regarding the specific chemical identity of the hazardous chemical(s) involved and the common names. In addition, information must be provided on the physical and chemical characteristics of the hazardous chemical; known acute and chronic health effects and related health information; exposure limits; whether the chemical is considered to be a carcinogen by NTP, IARC, or OSHA; precautionary measures; emergency and first-aid procedures; and the identification (name, address, and telephone number) of the organization responsible for preparing the sheet.

Copies of the MSDS for hazardous chemicals in a given worksite are to be readily accessible to employees in that area. As a source of detailed information on hazards, they must be readily available to workers during each workshift. MSDSs have no prescribed format. ANSI standard no. Z400.1—*Material Safety Data Sheet Preparation*—may be used. The non-mandatory MSDS form (OSHA 174) also may be used as a guide and a copy can be obtained from OSHA field offices.

Employers must prepare a list of all hazardous chemicals in the workplace. When the list is complete, it should be checked against the collected MSDSs that the employer has been sent.

If there are hazardous chemicals used for which no MSDS has been received, the employer must contact the supplier, manufacturer, or importer to obtain the missing MSDS. A record of the contact must be maintained.

Employers must establish a training and information program for employees who are exposed to hazardous chemicals in their work area at the time of initial assignment and whenever a new hazard is introduced into their work area.

At a minimum, the discussion topics must include the following:

- The hazard communication standard and its requirements.
- The components of the hazard communication program in the employees' workplaces.
- Operations in work areas where hazardous chemicals are present.
- Where the employer will keep the written hazard evaluation procedures, communications program, lists of hazardous chemicals, and the required MSDS forms.

The employee training plan must consist of the following elements:

- How the hazard communication program is implemented in that workplace, how to read and interpret information on labels and the MSDS, and how employees can obtain and use the available hazard information.
- The hazards of the chemicals in the work area. (The hazards may be discussed by individual chemical or by hazard categories such as flammability.)
- Measures employees can take to protect themselves from the hazards.
- Specific procedures put into effect by the employer to provide protection such as engineering controls, work practices, and the use of personal protective equipment (PPE).
- Methods and observations—such as visual appearance or smell—workers can use to detect the presence of a hazardous chemical to which they may be exposed.

A “trade secret” is something that gives an employer an opportunity to obtain an advantage over competitors who do not know about the trade secret or who do not use it. For example, a trade secret may be a confidential device, pattern, information, or chemical make-up. Chemical industry trade secrets are generally formulas, process data, or a “specific chemical identity.” The latter is the type of trade secret information referred to in the Hazard Communication Standard. The term includes the chemical name, the Chemical Abstracts Services (CAS) Registry Number, or any other specific information that reveals the precise designation. It does not extend to PELs or TLVs. If the hazardous chemical or a component thereof has a PEL or TLV, this must be reflected on the MSDS.

The standard strikes a balance between the need to protect exposed employees and the employer’s need to maintain the confidentiality of a bona fide trade secret. This is achieved by providing for limited disclosure to health professionals who are furnishing medical or other occupational health services to exposed employees, employees and their designated representatives, under specified conditions of need and confidentiality.

The chemical manufacturer, importer, or employer must immediately disclose the specific chemical identity of a hazardous chemical to a treating physician or nurse when the information is needed for proper emergency or first-aid treatment. As soon as circumstances permit, the chemical manufacturer, importer, or employer may obtain a written statement of need and a confidentiality agreement.

Under the contingency described here, the treating physician or nurse has the ultimate responsibility for determining that a medical emergency exists. At the time of the emergency, the professional judgment of the physician or nurse regarding the situation must form the basis for triggering the immediate disclosure requirement. Because the chemical manufacturer, importer, or employer can demand a written statement of need and a confidentiality agreement to be completed after the emergency is abated, further disclosure of the trade secret can be effectively controlled.

In non-emergency situations, chemical manufacturers, importers, or employers must disclose the withheld specific chemical identity to health professionals providing medical or other occupational health services to exposed employees, and to employees and their designated representatives, if certain conditions are met. In this context, “health professionals” include physicians, occupational health nurses, industrial hygienists, toxicologists, or epidemiologists.

The request for information must be in writing and must describe with reasonable detail the medical or occupational health need for the information. The request will be considered if the information will be used for one or more of the following activities:

- To assess the hazards of the chemicals to which employees will be exposed.
- To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels.
- To conduct pre-assignment or periodic medical surveillance of exposed employees.
- To provide medical treatment to exposed employees.
- To select or assess appropriate personal protective equipment for exposed employees.
- To design or assess engineering controls or other protective measures for exposed employees.
- To conduct studies to determine the health effects of exposure.

The health professional, employee, or designated representative must also specify why alternative information is insufficient. The request for information must explain in detail why disclosure of the specific chemical identity is essential, and include the procedures to be used to protect the confidentiality of the information. It must include an agreement not to use the information for any purpose other than the health need stated or to release it under any circumstances, except to OSHA.

The standard further describes in detail the steps that will be followed in the event that an employer decides not to disclose the specific chemical identity requested by the health professional, employee, or designated representative. (See 1910.1200(i)(7).)

OSHA offers a variety of programs and initiatives to help employers comply with the agency's standards or guidelines. The following is a brief summary of some of these efforts.

Safety and Health Program Management Guidelines

Effective management of worker safety and health protection is a decisive factor in reducing the extent and severity of work-related injuries and illnesses and their related costs. To assist employers and employees in developing effective safety and health programs, OSHA published recommended *Safety and Health Program Management Guidelines (Federal Register 54 (18): 3908-3916, January 26, 1989)*. These voluntary guidelines apply to all places of employment covered by OSHA.

The guidelines identify four general elements that are critical to the development of a successful safety and health management program:

- Management commitment and employee involvement,
- Worksite analysis,
- Hazard prevention and control, and
- Safety and health training.

The guidelines recommend specific action, under each of these general elements to achieve an effective safety and health program. A single free copy of the guidelines can be obtained from the U.S. Department of Labor, OSHA Publications, P.O. Box 37535, Washington, DC 20013-7535, by sending a self-addressed mail label with your request.

(Available on the World Wide Web under Federal Register, <http://www.osha.gov/>).

State Programs

The *Occupational Safety and Health Act of 1970* encourages states to develop and operate their own job safety and health plans. States with plans approved under section 18(b) of the Act must adopt standards and enforce requirements that are at least as effective as federal requirements. There are currently 25 state plan states and territories: 23 of these states administer plans covering both private and public (state and local government) employees; the other 2 states, Connecticut and New York, cover public employees only.

Plan states must adopt standards comparable to federal requirements within 6 months of a federal standard's promulgation. Until a state standard is promulgated, OSHA will provide interim enforcement assistance, as appropriate, in these states. A listing of approved state plans appears at the end of this publication.

Consultation Services

Consultation assistance is available on request to employers who want help in establishing and maintaining a safe and healthful workplace. Largely funded by OSHA, the service is provided at no cost to the employer. Primarily developed for smaller employers with more hazardous operations, the consultation service is delivered by state government agencies or universities employing professional safety and health consultants. Comprehensive assistance includes an appraisal of all mechanical systems, physical work practices and occupational safety and health hazards of the workplace, and all aspects of the employer's present job safety and health program.

In addition, the service offers assistance to employers in developing and implementing an effective safety and health program. No penalties are proposed or citations issued for any safety or health problems identified by the consultant. The service is confidential.

For more information concerning consultation assistance, see the list of consultation projects at the end of this publication.

Voluntary Protection Programs (VPPs)

Voluntary Protection Programs and onsite consultation services, when coupled with an effective enforcement program, expand worker protection to help meet the goals of the OSH Act. The three VPPs—Star, Merit, and Demonstration—are designed to recognize outstanding achievement by companies that have successfully incorporated comprehensive safety and health programs into their total management system. The VPPs motivate others to achieve excellent safety and health results in the same outstanding way as they establish a cooperative relationship among employers, employees, and OSHA.

For additional information on VPPs and how to apply, contact the OSHA area or regional offices listed at the end of this publication.

Training and Education

OSHA's area offices offer a variety of information services, such as publications, audiovisual aids, technical advice, and speakers for special engagements. OSHA's Training Institute in Des Plaines, IL, provides basic and advanced courses in safety and health for federal and state compliance officers, state consultants, federal agency personnel, and private sector employers, employees, and their representatives.

The OSHA Training Institute also has established OSHA Training Institute Education Centers to address the increased demand for its courses from the private sector and from other federal agencies. These centers are nonprofit colleges, universities, and other organizations that have been selected after a competition for participation in the program. They are located in various parts of the U.S.

OSHA also provides funds to nonprofit organizations, through grants, to conduct workplace training and education in subjects

where OSHA believes there is a lack of workplace training. Grants are awarded annually and grant recipients are expected to contribute 20 percent of the total grant cost.

For more information on grants, training and education, contact the OSHA Training Institute, Office of Training and Education, 1555 Times Drive, Des Plaines, IL 60018, (847) 297-4810.

For further information on any OSHA program, contact your nearest OSHA area or regional office listed at the end of this publication.

Electronic Information

Internet—OSHA standards, interpretations, directives, and additional information are now on the World Wide Web at <http://www.osha.gov>.

CD-ROM—A wide variety of OSHA materials—including standards, interpretations, directives, and more—can be purchased on CD-ROM from the U.S. Government Printing Office, Superintendent of Documents.

To order, write to the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Specify *OSHA Regulations, Documents and Technical Information on CD ROM, (ORDT)*, S/N 729-1300000-5. The price is \$38 per year (\$47.50 foreign); a single copy is \$15.00 (\$18.75 foreign). The phone number is (202) 512-1800.

Emergencies

For life-threatening situations, call (800) 321-OSHA. Complaints will go immediately to the nearest OSHA area or state office for help.

For further information on any OSHA program, contact your nearest OSHA area or regional office listed at the end of this publication.

Yes. OSHA has developed a variety of materials and publications to help employers and employees develop and implement effective hazard communication programs. Lists of products, services, and other resources are as follows:

OSHA Related Publications

A single free copy of the following publications can be obtained from the U.S. Department of Labor, OSHA Publications Office, P.O. Box 37535, Washington, DC 20013-7535, (202) 219-4677, (202) 219-9266 (fax), or from the nearest OSHA regional or area office listed at the end of this publication. Send a self-addressed mailing label with your request.

These and other products can be ordered or downloaded from OSHA's Web Site at <http://www.osha.gov>.

All About OSHA—OSHA 2056

Consultation Services for the Employer—OSHA 3047

Employee Workplace Rights—OSHA 3021

How to Prepare for Workplace Emergencies—OSHA 3088

OSHA Inspections—OSHA 2098

Personal Protective Equipment—OSHA 3077

Respiratory Protection—OSHA 3079

Hazard Communication; Final Rule. Federal Register 59(27): 6126-6184, February 9, 1994.

The following publications are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, phone (202) 512-1800, fax (202) 512-2250. Include GPO Order No. and make checks payable to Superintendent of Documents.

Hazard Communication—A Compliance Kit—

OSHA 3104 (A reference guide to step-by-step requirements for compliance with the OSHA standard.)

Order No. 029-016-00147-6; cost \$18.00 domestic; \$22.50 foreign.

Hazard Communication Guidelines for Compliance—
OSHA 3111

Order No. 029-016-00163-8; cost \$1.50.

Job Hazard Analysis—OSHA 3071

Order No. 029-016-00142-5; cost \$1.00.

Training Requirements in OSHA Standards and Training Guidelines—OSHA 2254

Order No. 029-016-00160-3; cost \$6.00.

National Technical Information Services Related Materials

The following materials are available from the National Technical Information Services, 5285 Port Royal Road, Springfield, VA 22161, phone (703) 605-6000. Web site is <http://www.ntis.gov>.

Eye Injuries and Eye Protection Equipment—

AVA 14624, SSOO, \$99.

Safety and Health Factors for Working with Formaldehyde—
hyde - AVA 17500, SSOO, \$99.***Safety and Health Factors with Temperature Stress—***

AVA 14626, SSOO, \$99.

Safety and Health Factors for Working with Silica—

AVA 20000, SSOO, \$90.

Safety and Health Requirements for Working with Carbon Monoxide—AVA 19005, SSOO, \$139.***Safety and Health Factors in Welding and Cutting—***

AVA 18463, VNB1, \$99.

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Alaska Department of Labor
1111 West 8th Street
Room 306
Juneau, AK 99801
(907) 465-2700

Director

Industrial Commission
of Arizona
800 W. Washington
Phoenix, AZ 85007
(602) 542-5795

Director

California Department
of Industrial Relations
45 Fremont Street
San Francisco, CA 94105
(415) 972-8835

Commissioner

Connecticut Department
of Labor
200 Folly Brook Boulevard
Wethersfield, CT 06109
(860) 566-5123

Director

Hawaii Department of Labor
and Industrial Relations
830 Punchbowl Street
Honolulu, HI 96813
(808) 586-8844

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Indiana Department of Labor
State Office Building
402 West Washington Street
Room W195
Indianapolis, IN 46204
(317) 232-2378

Commissioner

Iowa Division of Labor
Services
1000 E. Grand Avenue
Des Moines, IA 50319
(515) 281-3447

Secretary

Kentucky Labor Cabinet
1047 U.S. Highway, 127
South, STE 2
Frankfort, KY 40601
(502) 564-3070

Commissioner

Maryland Division of Labor
and Industry
Department of Labor
Licensing and Regulation
1100 N. Eutaw Street,
Room 613
Baltimore, MD 21201-2206
(410) 767-2215

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Michigan Department
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and Industry Services
4th Floor, Law Building
P.O. Box 30004
Lansing, MI 48909
(517) 373-7230

Commissioner

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443 Lafayette Road
St. Paul, MN 55155
(612) 296-2342

Administrator

Nevada Division of Industrial
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400 West King Street
Carson City, NV 89710
(702) 687-3032

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Department
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502
(505) 827-2850

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W. Averell Harriman State
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Building - 12, Room 500
Albany, NY 12240
(518) 457-2741

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319 Chapanoke Road
Raleigh, NC 27603
(919) 662-4585

Administrator

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& Business Services
Occupational Safety
and Health Division
(OR-OSHA)
350 Winter Street, NE,
Room 430
Salem, OR 97310-0220
(503) 378-3272

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Resources
Prudencio Rivera Martinez
Building
505 Munoz Rivera Avenue
Hato Rey, PR 00918
(809) 754-2119

Director

South Carolina Department
of Labor
Licensing and Regulation
Koger Office Park, Kingstree
Building
110 Centerview Drive
P.O. Box 11329
Columbia, SC 29210
(803) 896-4300

Commissioner

Tennessee Department
of Labor
710 James Robertson
Parkway
Nashville, TN 37243-0659
(615) 741-2582

Commissioner

Industrial Commission
of Utah
160 East 300 South, 3rd Floor
P.O. Box 146650
Salt Lake City, UT 84114-
6650
(801) 530-6898

Commissioner

Vermont Department
of Labor and Industry
National Life Building -
Drawer 20
120 State Street
Montpelier, VT 05620-3401
(802) 828-2288

Commissioner

Virginia Department of Labor
and Industry
Powers-Taylor Building
13 South 13th Street
Richmond, VA 23219
(804) 786-2377

Commissioner

Virgin Islands Department
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2131 Hospital Street, Box 890
Christiansted
St. Croix, VI 00820-4666
(809) 773-1994

Director

Washington Department
of Labor and Industries
General Administrative
Building
P.O. Box 44001
Olympia, WA 98504-4001
(360) 902-4200

Administrator

Worker's Safety and
Compensation Division (WSC)
Wyoming Department
of Employment
Herschler Building,
2nd Floor East
122 West 25th Street
Cheyenne, WY 82002
(307) 777-7786

State	Telephone
Alabama	(205) 348-7136
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Arkansas	(501) 682-4522
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Colorado	(970) 491-6151
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.....	(414) 521-5063 (S)
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(H) - Health

(S) - Safety

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Westbury, NY	(516) 334-3344
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Wilkes-Barre, PA	(717) 826-6538
Wilmington, DE	(302) 573-6115

Region I

(CT,* MA, ME, NH, RI, VT*)
JKF Federal Building
Room E-340
Boston, MA 02203
Telephone: (617) 565-9860

Region II

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201 Varick Street
Room 670
New York, NY 10014
Telephone: (212) 337-2378

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Room 602
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Telephone: (415) 975-4310

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1111 Third Avenue
Suite 715
Seattle, WA 98101-3212
Telephone: (206) 553-5930

*These states and territories operate their own OSHA-approved job safety and health programs (Connecticut and New York plans cover public employees only). States with approved programs must have a standard that is identical to, or at least as effective as, the federal standard.

Hazard Communication Guidelines for Compliance



U.S. Department of Labor
Occupational Safety and Health Administration

OSHA 3111
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This informational booklet is intended to provide a generic, non-exhaustive overview of a particular standards-related topic. This publication does not itself alter or determine compliance responsibilities, which are set forth in OSHA standards themselves and the *Occupational Safety and Health Act*. Moreover, because interpretations and enforcement policy may change over time, for additional guidance on OSHA compliance requirements, the reader should consult current and administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the Courts.

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Hazard Communication Guidelines for Compliance



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OSHA 3111
2000 (Reprinted)

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OSHA's Hazard Communication Standard (HCS) 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. They also need to know what protective measures are available to prevent adverse effects from occurring. OSHA designed the HCS to provide employees with the information they need to know.

Knowledge acquired under the HCS will help employers provide safer workplaces for their employees. When employees have information about the chemicals being used, they can take steps to reduce exposures, substitute less hazardous materials, and establish proper work practices. These efforts will help prevent the occurrence of work-related illnesses and injuries caused by chemicals.

The HCS addresses the issues of evaluating and communicating chemical hazard information to workers. Evaluation of chemical hazards involves a number of technical concepts, and is a process that requires the professional judgment of experienced experts. That's why the HCS is designed so that employers who simply use chemicals—rather than produce or import them—are not required to evaluate the hazards of those chemicals. Hazard determination is the responsibility of the manufacturers and importers of the chemicals, who then must provide the hazard information to employers that purchase their products

Employers that do not produce or import chemicals need only focus on those parts of the rule that deal with establishing a workplace program and communicating information to their workers. This publication is a general guide for such employers to help them determine what the HCS requires. It does not supplant or substitute for the regulatory provisions, but rather provides a simplified outline of the steps an average employer would follow to meet those requirements.

OSHA has provided a simple summary of the HCS in a pamphlet entitled *Chemical Hazard Communication (OSHA 3084)*. Some employers prefer to familiarize themselves with the rule's requirements by reading this pamphlet. A single, free copy may be obtained from your local OSHA Area Office, or by contacting the OSHA Publications Office at (202) 693-1888.

The standard itself is long and some parts are technical, but the basic concepts are simple. In fact, the requirements reflect what many employers have been doing for years. You may find that you already largely comply with many of the provisions and will simply have to modify your existing programs somewhat. If you are operating in an OSHA-approved State Plan State, you must comply with the State's requirements, which may be different than those of the Federal rule. Many of the State Plan States had hazard communication or "right-to-know" laws prior to promulgation of the federal rule. Employers in State Plan States should contact their State OSHA Offices for more information regarding applicable requirements. (See the list of contacts in "States with Approved Plans" at the back of this booklet.)

The HCS requires information to be prepared and transmitted regarding all hazardous chemicals. The HCS covers both physical hazards (such as flammability) and health hazards (such as irritation, lung damage, and cancer.) Most chemicals used in the workplace have some hazard potential, and thus will be covered by the rule.

One difference between this rule and many others adopted by OSHA is that this one is performance-oriented. That means you have the flexibility to adapt the rule to the needs of your workplace, rather than having to follow specific rigid requirements. It also means that you have to exercise more judgment to implement an appropriate and effective program.

The standard's design is simple. Chemical manufacturers and importers must evaluate the hazards of the chemicals they produce or import. Using that information, they must then prepare labels for containers and more detailed technical bulletins called material safety data sheets (MSDSs).

Chemical manufacturers, importers, and distributors of hazardous chemicals are all required to provide the appropriate labels and material safety data sheets to the employers to whom they ship the

chemicals. The information must be provided automatically. Every container of hazardous chemicals you receive must be labeled, tagged, or marked with the required information. Your suppliers also must send you a properly completed MSDS at the time of the first shipment of the chemicals, and with the next shipment after the MSDS is updated with new and significant information about the hazards.

You can rely on the information received from your suppliers. You have no independent duty to analyze the chemical or evaluate the hazards of it.

Employers that “use” hazardous chemicals must have a program to ensure the information is provided to exposed employees. “Use” means to package, handle, react, or transfer. This is an intentionally broad scope, and includes any situation where a chemical is present in such a way that employees may be exposed under normal conditions of use or in a foreseeable emergency.

The requirements of the rule that deal specifically with the hazard communication program are found in the standard in paragraphs (e), written hazard communication programs; (f), labels and other forms of warning; (g), material safety data sheets; and (h), employee information and training. The requirements of these paragraphs should be the focus of your attention. Concentrate on becoming familiar with them, using paragraphs (b), scope and application, and (c), definitions, as references when needed to help explain the provisions.

There are two types of work operations where coverage of the rule is limited. These are laboratories and operations where chemicals are only handled in sealed containers (e.g., a warehouse). The limited provisions for these workplaces can be found in paragraph (b), scope and application. Basically, employers having these types of work operations need only keep labels on containers as they are received, maintain material safety data sheets that are received and give employees access to them, and provide information and training for employees. Employers do not have to have written hazard communication programs and lists of chemicals for these types of operations.

The limited coverage of laboratories and sealed container operations addresses the obligation of an employer to the workers in the

operations involved, and does not affect the employer's duties as a distributor of chemicals. For example, a distributor may have warehouse operations where employees would be protected under the limited sealed container provisions. In this situation, requirements for obtaining and maintaining MSDSs are limited to providing access to those received with containers while the substance is in the workplace, and requesting MSDSs when employees request access for those not received with the containers. However, as a distributor of hazardous chemicals, that employer will still have responsibility for providing MSDSs to downstream customers at the time of the first shipment and when the MSDS is updated. Therefore, although they may not be required for the employees in the work operation, the distributor may, nevertheless, have to have MSDSs to satisfy other requirements of the rule.

Hazard communication will be a continuing program in your facility. Compliance with HCS is not a “one shot deal.” In order to have a successful program, you must assign responsibility for both the initial and ongoing activities that have to be undertaken to comply with the rule. In some cases, these activities may be part of current job assignments. For example, Site Supervisors are frequently responsible for on-the-job training sessions. Early identification of the responsible employees and their involvement in developing your action plan will result in a more effective program design. Involving affected employees also will enhance the evaluation of the effectiveness of your program.

For any safety and health program, success depends on commitment at every level of the organization. This is particularly true for hazard communication, where success requires a change in behavior. This will occur only if employers understand the program and are committed to its success, and if the people presenting the information motivate employees.

The standard requires a list of hazardous chemicals in the workplace as part of the written hazard communication program. The list will eventually serve as an inventory of everything for which you must maintain an MSDS. At this point, however, preparing the list will help you complete the rest of the program since it will give you some idea of the scope of the program required for compliance in your facility.

The best way to prepare a comprehensive list is to survey the workplace. Purchasing records also may help, and certainly employers should establish procedures to ensure that in the future purchasing procedures result in MSDSs being received before using a material in the workplace.

The broadest possible perspective should be taken when doing the survey. Sometimes people think of “chemicals” as being only liquids in containers. The HCS covers chemicals in all physical forms—liquids, solids, gases, vapors, fumes, and mists—whether they are “contained” or not. The hazardous nature of the chemical and the potential for exposure are the factors that determine whether a chemical is covered. If it’s not hazardous, it’s not covered. If there is no potential for exposure, (e.g., the chemical is inextricably bound and cannot be released), the rule does not cover the chemical.

Look around. Identify the chemicals in containers, including pipes, but also think about chemicals generated in the work operations. For example, welding fumes, dusts, and exhaust fumes are all sources of chemical exposures. Read labels provided by the suppliers on hazard information. Make a list of all chemicals in the workplace that are potentially hazardous. For your own information and planning, you also may want to note on the list the location(s) of the products within the workplace, and an indication of the hazards as found on the label. This will help you as you prepare the rest of your program.

Paragraph (b), scope and application, includes exemptions for various chemicals or workplace situations. After compiling the complete list of chemicals, you should review paragraph (b) to determine if any of the items can be eliminated from the list because they are exempted materials. For example, food, drugs, and cosmetics brought into the workplace for employee consumption are exempt; rubbing alcohol in the first aid kit would not be covered.

Once you have compiled as complete a list as possible of the potentially hazardous chemicals in the workplace, the next step is to determine if you have received material safety data sheets for all of them. Check your files against the inventory you have just compiled. If any are missing, contact your supplier and request one. It is a good idea to document these requests, either by copy of a letter or a note regarding telephone conversations. If you have MSDSs for chemicals that are not on your list, figure out why. Maybe you don't use the chemical anymore. Or maybe you missed it in your survey. Some suppliers do provide MSDSs for products that are not hazardous. These do not have to be maintained by you. If you have questions regarding the hazard status of a chemical, contact the manufacturer, distributor, or importer.

You should not allow employees to use any chemicals for which you have not received an MSDS. The MSDS provides information you need to ensure you have implemented proper protective measures for exposure.

The HCS requires all workplaces where employees are exposed to hazardous chemicals to have a written plan that describes how that facility will implement the standard. Preparation of the plan is not just a paper exercise—all of the elements must be implemented in the workplace to comply with the rule. See paragraph (e) of the standard for the specific requirements regarding written hazard communication programs. The only work operations that do not have to comply with the written plan requirements are laboratories and work operations where employees only handle chemicals in sealed containers. See paragraph (b), scope and application, for the specific requirements for these two types of workplaces.

The plan does not have to be lengthy or complicated. It is intended to be a blueprint for implementing your program—an assurance that all aspects of the requirements have been addressed.

Many trade associations and other professional groups have provided sample programs and other assistance materials to affect employers. These have been very helpful to many employers since they tend to be tailored to the particular industry involved. You may wish to investigate whether your industry trade groups have developed such materials.

Although such general guidance may be helpful, you must remember that the written program has to reflect what you are doing in your workplace. Therefore, if you use a generic program, you must adapt it to address the facility it covers.

For example, the written plan must list the chemicals present at the site and indicate where written materials will be made available to employees. It also may indicate who is responsible for the various aspects of the program in your facility.

If OSHA inspects your workplace for compliance with the HCS, the OSHA compliance officer will ask to see your written plan at the outset of the inspection. In general, the following items will be considered in evaluating your program.

The written program must describe how the requirements for labels and other forms of warning, materials safety data sheets, and employee information and training, are going to be met in your facility. The following discussion provides the type of information compliance officers will be looking for to decide whether you have properly addressed these elements of the hazard communication program.

Labels and Other Forms of Warning

In-plant containers of hazardous chemicals must be labeled, tagged, or marked with the identity of the material and appropriate hazard warnings. Chemical manufacturers, importers, and distributors must ensure that every container of hazardous chemicals they ship is appropriately labeled with such information and with the name and address of the producer or other responsible party. Employers purchasing chemicals can rely on the labels provided by their suppliers. If the material is subsequently transferred by the employer from a labeled container to another container, the employer will have to label that container, unless it is subject to the portable container exemption. See paragraph (f) for specific labeling requirements.

The primary information to be obtained from an OSHA-required label is the identity for the material and appropriate hazard warnings. The identity is any term which appears on the label, the MSDS, and the list of chemicals, and thus links these three sources of information. The identity used by the supplier may be a common or trade name (“Black Magic Formula”), or a chemical name (1, 1, 1 - trichloroethane). The hazard warning is a brief statement of the hazardous effects of the chemical (“flammable,” “causes lung damage”). Labels frequently contain other information, such as precautionary measures (“do not use near open flame”) but this information is provided voluntarily and is not required by the rule. Labels must be legible and prominently displayed. There are no specific requirements for size or color or any specified test.

With these requirements in mind, the compliance officer will be looking for the following types of information to ensure that labeling is properly implemented in your facility:

- Designation of person(s) responsible for ensuring labeling of in-plant containers;
- Designation of person(s) responsible for ensuring labeling of any shipped container;
- Description of labeling system(s) used;
- Description of written alternatives to labeling of in-plant containers (if used); and,
- Procedures to review and update label information when necessary.

Employers that are purchasing and using hazardous chemicals—rather than producing or distributing them—will primarily be concerned with ensuring that every purchased container is labeled. If materials are transferred into other containers, the employer must ensure that these are labeled as well, unless they fall under the portable container exemption (paragraph f(7)). In terms of labeling systems, you can choose to use the labels provided by your suppliers on the containers. These will generally be verbal text labels, and do not usually include numerical rating systems or symbols that require special training. The most important thing to remember is that this is a continuing duty—all in-plant containers of hazardous chemicals must always be labeled. Therefore, it is important to designate someone to be responsible for ensuring that the labels are maintained as required on the containers in your facility and that newly purchased materials are checked for labels prior to use.

Material Safety Data Sheets

Chemical manufacturers and importers are required to obtain or develop a material safety data sheet for each hazardous chemical they produce or import. Distributors are responsible for ensuring that their customers are provided a copy of these MSDSs. Employers must have an MSDS for each hazardous chemical which they use. Employers may rely on the information received from their suppliers. The specific requirements for material safety data sheets are in paragraph (g) of the standard.

There is no specific format for the MSDS under the rule, although there are specific information requirements. OSHA has developed a nonmandatory format, OSHA Form 174, which may be used by chemical manufacturers and importers to comply with the rule. The MSDS must be in English. You are entitled to receive from your supplier a data sheet which includes all of the information required under the rule. If you do not receive one automatically, you should request one. If you receive one that is obviously inadequate, with, for example, blank spaces that are not completed, you should request an appropriately completed one. If your request for a data sheet or for a corrected data sheet does not produce the information needed, you should contact your local OSHA Area Office for assistance in obtaining the MSDS.

Under the rule, the role of MSDSs is to provide detailed information on each hazardous chemical, including its potential hazardous effects, its physical and chemical characteristics, and recommendations for appropriate protective measures. This information should be useful to you as the employer responsible for designing protective programs, as well as to the workers. If you are not familiar with material safety data sheets and with chemical terminology, you may need to learn to use them yourself. A glossary of MSDS terms may be helpful in this regard. Generally speaking, most employers using hazardous chemicals will primarily be concerned with MSDS information regarding hazardous effects and recommended protective measures. Focus on the sections of the MSDS that are applicable to your situation.

MSDSs must be readily accessible to employees when they are in their work areas during their workshifts. This may be accomplished in many different ways. You must decide what is appropriate for your particular workplace. Some employers keep the MSDSs in a binder in a central location (e.g., in the pickup truck on a construction site.) Others, particularly in workplaces with large numbers of chemicals, computerize the information and provide access through terminals. As long as employees can get the information when they need it, any approach may be used. The employees must have access to the MSDSs themselves—simply having a system where the information can be read to them over the phone is permitted only under the mobile worksite provision, paragraph (g)(9), when employees must travel between workplaces during the shift. In this situation, they have access to the MSDSs prior to leaving the primary worksite, and when they return, so the telephone system is simply an emergency arrangement.

In order to ensure that you have a current MSDS for each chemical in the plant as required, and that you provide employee access, the compliance officers will be looking for the following types of information in your written program:

- Designation of person(s) responsible for obtaining and maintaining the MSDSs;
- How such sheets are to be maintained in the workplace (e.g., in notebooks in the work area(s) or in a computer with terminal access), and how employees can obtain access to them when they are in their work area during the workshift;

- Procedures to follow when the MSDS is not received at the time of the first shipment;
- For producers, procedures to update the MSDS when new and significant health information is found; and,
- Description of alternatives to actual data sheets in the workplace, if used.

For employers using hazardous chemicals, the most important aspect of the written program in terms of MSDSs is to ensure that someone is responsible for obtaining and maintaining the MSDSs for every hazardous chemical in the workplace. The list of hazardous chemicals required to be maintained as part of the written program will serve as an inventory. As new chemicals are purchased, the list should be updated. Many companies have found it convenient to include on their purchase order the name and address of the person designated in their company to receive MSDSs.

Employee Information and Training

Each employee who may be “exposed” to hazardous chemicals when working must be provided information and be trained prior to initial assignment to work with a hazardous chemical, and whenever the hazard changes. “Exposure” or “exposed” under the rule means that an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact, or absorption) and includes potential (e.g., accidental or possible) exposure. See paragraph (h) of the standard for specific requirements. Information and training may be done either by individual chemical, or by categories of hazards (such as flammability or carcinogenicity). If there are only a few chemicals in the workplace, then you may want to discuss each one individually. Where there are a large number of chemicals, or the chemicals change frequently, you will probably want to train generally based on the hazard categories (e.g., flammable liquids, corrosive materials, carcinogens). Employees will have access to the substance-specific information on the labels and MSDSs. Employers must ensure, however, that employees are made aware of which hazard category a chemical falls within.

Information and training are a critical part of the hazard communication program. Workers obtain information regarding hazards and

protective measures through written labels and material safety data sheets. It is through effective information and training, however, that workers will learn to read and understand such information, determine how to acquire and use it in their own workplace, and understand the risks of exposure to the chemical in their workplaces as well as the ways to protect themselves. A properly conducted training program will ensure comprehension and understanding. It is not sufficient to either just read material to the workers or simply hand them material to read. You want to create a climate where workers feel free to ask questions. This will help you to ensure that the information is understood. You must always remember that the underlying purpose of the HCS is to reduce the incidence of chemical source illnesses and injuries. This will be accomplished by modifying behavior through the provision of hazard information and information about protective measures. If your program works, you and your workers will better understand the chemical hazards within the workplace. The procedures you establish, regarding, for example, purchasing, storage, and handling of these chemicals will improve, and thereby reduce the risks posed to employees exposed to the chemical hazards involved. Furthermore, your workers' comprehension also will be increased, and proper work practices will be followed in your workplace.

If you are going to do the training yourself, you will have to understand the material and be prepared to motivate the workers to learn. This is not always an easy task, but the benefits are worth the effort. More information regarding appropriate training can be found in *Training Requirements in OSHA Standards and Training Guidelines (OSHA 2254)*, which contains voluntary training guidelines prepared by OSHA's Training Institute. A copy of this document is available from the Superintendent of Documents, Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954; (202) 512-1800.

When reviewing your written program regarding information and training, consider the following items:

- Designation of person(s) responsible for conducting training;
- Format of the program used (audiovisuals, class room instruction);
- Elements of the training programs (should be consistent with the elements in paragraph (h) of the HCS); and,

- Procedure to train new employees at the time of their initial assignment to work with a hazardous chemical, and to train employees when introducing a new hazard into the workplace.

The written program should provide enough details about the employer's plans in this area to assess whether or not a good faith effort is being made to train employees. OSHA does not expect that every workers will be able to recite all the information about each chemical in the workplace. In general, the most important aspects of training under the HCS are to ensure that employees are aware that they are exposed to hazardous chemicals, that they know how to read and use labels and material safety data sheets, and that, as a consequence of learning this information, they are following the appropriate protective measures established by the employer. OSHA compliance officers will be talking to employees to determine if they have received training, if they know they are exposed to hazardous chemicals, and if they know where to obtain substance specific information on labels and MSDSs.

The rule does not require employers to maintain records of employee training, but many employers choose to do so. This may help you monitor your own program to ensure that you have trained all employees appropriately. If you already have a training program, you may simply have to supplement it with whatever additional information is required under the HCS. For example, construction employers that are already in compliance with the construction training standard (29 CFR 1926.21) will have little extra training to do.

An employer can provide employees information and training through whatever means found appropriate and protective. Although there would always have to be some training on site (such as informing employees of the location and availability of the written program and MSDSs), employee training may be satisfied in part by general training about the requirements of the HCS which is provided by, for example, trade associations, unions, colleges, and professional schools. In addition, previous training, education, and experience of a worker may relieve the employer of some of the burdens of information and training that worker. Regardless of the method relied upon, however, the employer is always ultimately responsible for ensuring that employees are adequately trained. If the compliance

officer finds that the training is deficient, the employer will be cited for the deficiency regardless of who actually provided the training on behalf of the employer.

In addition to these specific items, compliance officers also will be asking the following questions in assessing the adequacy of the program:

- Does a list of the hazardous chemicals exist in each work area or at a central location?
- Are methods the employer will use to inform employees of the hazards of non-routine tasks outlined?
- Are employees informed of the hazards associated with chemicals contained in unlabeled pipes in their work areas?
- On multi-employer worksites, has the employer provided other employers with information about labeling systems and precautionary measures where the other employers have employees exposed to the initial employer's chemicals?
- Is the written program made available to employees and their designated representatives?

If your program adequately addresses the means of communicating information to employees in your workplace and provides answers to the basic questions outlined above, it will comply with the rule.

The following checklist will help to ensure you comply with the rule:

- Obtained a copy of the rule.
- Read and understood the requirements.
- Assigned responsibility for tasks.
- Prepared an inventory of chemicals.
- Ensured containers are labeled.
- Obtained MSDS for each chemical.
- Prepared written program.
- Made MSDSs available to workers.
- Conducted training of workers.
- Established procedures to maintain current program.
- Established procedures to evaluate effectiveness.

If you have a question regarding compliance with HCS, you should contact your local OSHA Area Office for assistance. In addition, each OSHA Regional Office has a Hazard Communication Coordinator who can answer your questions. Free consultation services also are available to assist employers, and information regarding these services can be obtained through the OSHA Area and Regional Offices as well (see lists at the end of this booklet).

Safety and Health Program Management

Effective management of worker safety and health protection is a decisive factor in reducing the extent and severity of work-related injuries and illnesses and their related costs. To assist employers and employees in developing effective safety and health programs, OSHA published recommended *Safety and Health Program Management Guidelines* (*Federal Register* 54(18):3908-3916, January 26, 1989). These voluntary guidelines apply to all places of employment covered by OSHA.

The guidelines identify four general elements that are critical to the development of a successful safety and health management program:

- management commitment and employee involvement;
- worksite analysis;
- hazard prevention and control; and
- safety and health training.

The guidelines recommend specific actions under each of these general elements to achieve an effective safety and health program. A single, free copy of the guidelines can be obtained from the U.S. Department of Labor, OSHA Publications, P.O. Box 37535, Washington, DC 20013-7535, by sending a self-addressed mailing label with your request.

State Programs

The Occupational Safety and Health Act of 1970 encourages states to develop and operate their own job safety and health plans. States with plans approved under section 18(b) of the OSH Act must adopt standards and enforce requirements that are at least as effective as federal requirements. There are currently 25 state plan states: 23 of these states administer plans covering both private and public (state and local public government) employees; the other two states, Connecticut and New York, cover public employees only. Plan states must adopt standards comparable to federal requirements within six months of a federal standard's promulgation. Until such time as a state standard is promulgated, Federal OSHA provides interim enforcement assistance, as appropriate, in these states. A listing of approved state plans appear at the end of this publication.

Consultation Services

Consultation assistance is available on request to employers who want help in establishing and maintaining a safe and healthful workplace. Largely funded by OSHA, the service is provided at no cost to the employer. Primarily developed for smaller employers with more hazardous operations, the consultation service is delivered by state government agencies or universities employing professional safety consultants and health consultants. Comprehensive assistance includes an appraisal of all work practices and environmental hazards of the workplace and all aspects of the employer's present job safety and health program.

The program is separate from OSHA's inspection efforts. No penalties are proposed or citations issued for any safety or health problems identified by the consultant. The service is confidential.

For more information concerning consultation assistance, see the list of consultation projects at the end of this publication.

Voluntary Protection Programs (VPP)

Voluntary Protection Programs (VPP) and onsite consultation services, when coupled with an effective enforcement program, expand worker protection to help meet the goals of the OSH Act. The three VPPs—Star, Merit, and Demonstration—are designed to recognize outstanding achievement by companies that have successfully incorporated comprehensive safety and health programs into their total management system. They motivate others to achieve excellent safety and health results in the same outstanding way as they establish a cooperative relationship among employers, employees, and OSHA.

For additional information on VPP and how to apply, contact your nearest OSHA area or regional office listed at the end of this publication.

Training and Education

OSHA Area Offices offer a variety of information services, such as publications, audiovisual aids, technical advice, and speakers for special engagements. The OSHA Training Institute in Des Plaines,

IL, provides basic and advanced courses in safety and health for federal and state compliance officers, state consultants, federal agency personnel, and private sector employers, employees, and their representatives.

OSHA also provides funds to nonprofit organizations, through grants to conduct workplace training and education in subjects where OSHA believes there is a lack of workplace training. Grants are awarded annually and grant recipients are expected to contribute 20 percent of the total grant cost.

For more information on grants, training, and education, contact the OSHA Training Institute, Office of Training and Education, 1555 Times Drive, Des Plaines, IL 60018, (847) 297-4810; (847) 297-4874 fax.

Electronic Information

Internet-OSHA standards, interpretations, directives, and additional information are now on the World Wide Web at <http://www.osha.gov/> and <http://www.osha-slc.gov/>.

CD-ROM—A wide variety of OSHA materials, including standards, interpretations, directives, and more can be purchased on CD-ROM from the U.S. Government Printing Office. To order, write to the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, or phone (202) 512-1800. Specify OSHA Regulations, Documents, and Technical Information on CD-ROM (ORDT), GPO Order NO. S/N 729-013-00000-5. The price is \$48 per year (\$57.50 foreign); \$17 per single copy (\$21.25 foreign).

Emergencies

For life-threatening situations, call (800) 321-OSHA. Complaints will go immediately to the nearest OSHA area or state office for help.

For further information on any OSHA program, contact your nearest OSHA area or regional office listed at the end of this publication.

Single free copies of the following publications can be obtained from the OSHA Publications Office, P.O. Box 37535, Washington, DC 20013-7535. Send a self-addressed mailing label with your request.

All About OSHA – OSHA 2056

Chemical Hazard Communication – OSHA 3084

Consultation Services for the Employer – OSHA 3074

Employee Workplace Rights – OSHA 3021

Employer Rights and Responsibilities Following an OSHA Inspection – OSHA 3000

How to Prepare for Workplace Emergencies – OSHA 3088

OSHA Inspections – OSHA 2098

Personal Protective Equipment – OSHA 3077

Respiratory Protection – OSHA 3079

The following publications may be ordered at cost, from the Superintendent of Documents, U.S. Government Printing Office, Washington DC 20402, (202) 512-1800. Include GPO Order No. and make checks payable to Superintendent of Documents.

Code of Federal Regulations – Title 29, Part 1926

Construction (OSHA) (\$30)

Order No. S/N 869-038-00107-1

OSHA Safety and Health Standards (29 CFR 1910.1000 to End)

(\$28) Order No. S/N 869-038-00105-5.

Handbook for Small Business – OSHA 2209 (\$7.50)

Order No. 029-016-00176-0.

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California Department
of Industrial Relations
455 Golden Gate Avenue -
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San Francisco, CA 94102
(415) 703-5050

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Connecticut Department of Labor
200 Folly Brook Boulevard
Wethersfield, CT 06109
(860) 566-5123

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Hawaii Department of Labor
and Industrial Relations
830 Punchbowl Street
Honolulu, HI 96813
(808) 586-8844

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Indiana Department of Labor
State Office Building
402 West Washington Street
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(317) 232-2378

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Iowa Division of Labor Services
1000 E. Grand Avenue
Des Moines, IA 50319-0209
(515) 281-3447

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Kentucky Labor Cabinet
1047 U.S. Highway, 127 South,
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(502) 564-3070

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Maryland Division of Labor
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Department of Labor, Licensing,
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1100 N. Eutaw Street,
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.....	(517) 322-1809(S)
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West Virginia	(304) 558-7890
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(H) - Health

(S) - Safety

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Region IV

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*These states and territories operate their own OSHA-approved job safety and health programs (Connecticut and New York plans cover public employees only). States with approved programs must have a standard that is identical to, or at least as effective as, the federal standard.

**Model Plans and Programs for the OSHA
Bloodborne Pathogens and
Hazard Communications Standards**

This informational booklet provides a general overview of a particular topic related to OSHA standards. It does not alter or determine compliance responsibilities in OSHA standards or the *Occupational Safety and Health Act of 1970*. Because interpretations and enforcement policy may change over time, you should consult current OSHA administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the Courts for additional guidance on OSHA compliance requirements.

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Model Plans and Programs for the OSHA Bloodborne Pathogens and Hazard Communications Standards



U.S. Department of Labor
Elaine L. Chao, Secretary

Occupational Safety and Health Administration
John L. Henshaw, Assistant Secretary

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Introduction

The mission of the Occupational Health and Safety Administration (OSHA) is to save lives, prevent injuries, and protect the health of America's workers. As part of the Department of Labor, OSHA promotes worker safety and health in every workplace in the United States.

OSHA'S bloodborne pathogens standard protects employees who work in occupations where they are at risk of exposure to blood or other potentially infectious materials. OSHA's hazard communication standard protects employees who may be exposed to hazardous chemicals. Both standards require employers to develop written documents to explain how they will implement each standard, provide training to employees, and protect the health and safety of their workers.

This publication includes a model exposure control plan to meet the requirements of the OSHA bloodborne pathogens standard and a model hazard communication program to meet the requirements of the hazard communication standard. The full text of these two OSHA standards, including the requirement for the written documents, is found in 29 CFR 1910.1030 and 29 CFR 1910.1200, respectively. You can access the full text of these standards through the OSHA website (www.osha.gov) by using the alphabetical index (click on "B" for the bloodborne pathogen standard; click on "H" for the hazard communication standard).

These model documents can be used as templates for your own workplace exposure control plan and hazard communication program, but you must tailor them to the specific requirements of your establishment. These sample plans contain all elements required by the bloodborne pathogens and hazard communication standards, so you should not eliminate any items when converting them for your own use. Your written plans must be accessible to all employees, either on-line or in an area where they are available for review on all shifts.

This publication provides general guidance on preparing written plans required by OSHA standards, but should not be considered a definitive interpretation for compliance with OSHA requirements. The reader should consult the OSHA bloodborne pathogens and hazard communication standards in their entirety for specific compliance requirements.

Part 1 Bloodborne Pathogens Standard

The following model for an Exposure Control Plan includes all elements required by the OSHA bloodborne pathogens standard (29 CFR 1910.1030). The intent of this model is to provide employers with an easy-to-use format that may be used as a template to develop a written exposure control plan tailored to the individual requirements of their establishments.

Model Exposure Control Plan

POLICY

The (Your facility name) is committed to providing a safe and healthful work environment for our entire staff. In pursuit of this goal, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA standard 29 *CFR* 1910.1030, "Occupational Exposure to Bloodborne Pathogens."

The ECP is a key document to assist our organization in implementing and ensuring compliance with the standard, thereby protecting our employees. This ECP includes:

- Determination of employee exposure
- Implementation of various methods of exposure control, including:
 - Universal precautions
 - Engineering and work practice controls
 - Personal protective equipment
 - Housekeeping
- Hepatitis B vaccination
- Post-exposure evaluation and follow-up
- Communication of hazards to employees and training
- Recordkeeping
- Procedures for evaluating circumstances surrounding exposure incidents

Implementation methods for these elements of the standard are discussed in the subsequent pages of this ECP.

PROGRAM ADMINISTRATION

- (Name of responsible person or department) is (are) responsible for implementation of the ECP. (Name of responsible person or department) will maintain, review, and update the ECP at least annually, and whenever necessary to include new or modified tasks and procedures. Contact location/phone number: _____ .
- Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.
- (Name of responsible person or department) will provide and maintain all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by the standard. (Name of responsible person or department) will ensure that adequate supplies of the aforementioned equipment are available in the appropriate sizes. Contact location/phone number: _____ .
- (Name of responsible person or department) will be responsible for ensuring that all medical actions required by the standard are performed and that appropriate employee health and OSHA records are maintained. Contact location/phone number: _____ .
- (Name of responsible person or department) will be responsible for training, documentation of training, and making the written ECP available to employees, OSHA, and NIOSH representatives. Contact location/phone number: _____ .

EMPLOYEE EXPOSURE DETERMINATION

The following is a list of all job classifications at our establishment in which all employees have occupational exposure:

<i>Job Title</i>	<i>Department/Location</i>
<u>(Example: Phlebotomists)</u>	<u>(Clinical Lab)</u>

(use as many lines as necessary)

The following is a list of job classifications in which some employees at our establishment have occupational exposure. Included is a list of tasks and procedures, or groups of closely related tasks and procedures, in which occupational exposure may occur for these individuals:

Example:

<i>Job Title</i>	<i>Department/Location</i>	<i>Task/Procedure</i>
<u>Housekeeper</u>	<u>Environmental Services</u>	<u>Handling Regulated Waste</u>

(use as many lines as necessary)

NOTE: Part-time, temporary, contract and per diem employees are covered by the bloodborne pathogens standard. The ECP should describe how the standard will be met for these employees.

METHODS OF IMPLEMENTATION AND CONTROL

Universal Precautions

All employees will utilize universal precautions.

Exposure Control Plan

Employees covered by the bloodborne pathogens standard receive an explanation of this ECP during their initial training session. It will also be reviewed in their annual refresher training. All employees can review this plan at any time during their work shifts by contacting (Name of responsible person or department). If requested, we will provide an employee with a copy of the ECP free of charge and within 15 days of the request.

(Name of responsible person or department) is responsible for reviewing and updating the ECP annually or more frequently if necessary to reflect any new or modified tasks and procedures that affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

Engineering Controls and Work Practices

Engineering controls and work practice controls will be used to prevent or minimize exposure to bloodborne pathogens. The

specific engineering controls and work practice controls used are listed below:

- (For example: non-glass capillary tubes, SESIPs, needleless systems)
- _____
- _____

Sharps disposal containers are inspected and maintained or replaced by (Name of responsible person or department) every (list frequency) or whenever necessary to prevent overfilling.

This facility identifies the need for changes in engineering controls and work practices through (Examples: Review of OSHA records, employee interviews, committee activities, etc.)

We evaluate new procedures and new products regularly by (Describe the process, literature reviewed, supplier info, products considered)

Both front-line workers and management officials are involved in this process in the following manner: (Describe employees' involvement)

(Name of responsible person or department) is responsible for ensuring that these recommendations are implemented.

Personal Protective Equipment (PPE)

PPE is provided to our employees at no cost to them. Training in the use of the appropriate PPE for specific tasks or procedures is provided by (Name of responsible person or department).

The types of PPE available to employees are as follows:
(gloves, eye protection, etc.)

PPE is located (List location) and may be obtained through (Name of responsible person or department). (Specify how employees will obtain PPE and who is responsible for ensuring that PPE is available.)

All employees using PPE must observe the following precautions:

- Wash hands immediately or as soon as feasible after removing gloves or other PPE.
- Remove PPE after it becomes contaminated and before leaving the work area.
- Used PPE may be disposed of in ([List appropriate containers for storage, laundering, decontamination, or disposal.](#))
- Wear appropriate gloves when it is reasonably anticipated that there may be hand contact with blood or OPIM, and when handling or touching contaminated items or surfaces; replace gloves if torn, punctured or contaminated, or if their ability to function as a barrier is compromised.
- Utility gloves may be decontaminated for reuse if their integrity is not compromised; discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.
- Never wash or decontaminate disposable gloves for reuse.
- Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth.
- Remove immediately or as soon as feasible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.

The procedure for handling used PPE is as follows:
(may refer to specific procedure by title or number and last date of review; include how and where to decontaminate face shields, eye protection, resuscitation equipment)

Housekeeping

Regulated waste is placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled or color-coded (see the following section “Labels”), and closed prior to removal to prevent spillage or protrusion of contents during handling.

The procedure for handling sharps disposal containers is:
(may refer to specific procedure by title or number and last date of review)

The procedure for handling other regulated waste is: *(may refer to specific procedure by title or number and last date of review)*

Contaminated sharps are discarded immediately or as soon as possible in containers that are closable, puncture-resistant, leak proof on sides and bottoms, and appropriately labeled or color-coded. Sharps disposal containers are available at (must be easily accessible and as close as feasible to the immediate area where sharps are used).

Bins and pails (e.g., wash or emesis basins) are cleaned and decontaminated as soon as feasible after visible contamination.

Broken glassware that may be contaminated is only picked up using mechanical means, such as a brush and dustpan.

Laundry

The following contaminated articles will be laundered by this company:

Laundering will be performed by (Name of responsible person or department) at (time and/or location).

The following laundering requirements must be met:

- handle contaminated laundry as little as possible, with minimal agitation
- place wet contaminated laundry in leak-proof, labeled or color-coded containers before transport. Use (specify either red bags or bags marked with the biohazard symbol) for this purpose.
- wear the following PPE when handling and/or sorting contaminated laundry: (List appropriate PPE).

Labels

The following labeling methods are used in this facility:

<i>Equipment to be Labeled</i>	<i>Label Type (size, color)</i>
<u>(specimens, contaminated laundry, etc.)</u>	<u>(red bag, biohazard label)</u>

(Name of responsible person or department) is responsible for ensuring that warning labels are affixed or red bags are used as required if regulated waste or contaminated equipment is brought into the facility. Employees are to notify (Name of responsible person or department) if they discover regulated waste containers, refrigerators containing blood or OPIM, contaminated equipment, etc., without proper labels.

HEPATITIS B VACCINATION

(Name of responsible person or department) will provide training to employees on hepatitis B vaccinations, addressing safety, benefits, efficacy, methods of administration, and availability.

The hepatitis B vaccination series is available at no cost after initial employee training and within 10 days of initial assignment to all employees identified in the exposure determination section of this plan. Vaccination is encouraged unless: 1) documentation exists that the employee has previously received the series; 2) antibody testing reveals that the employee is immune; or 3) medical evaluation shows that vaccination is contraindicated.

However, if an employee declines the vaccination, the employee must sign a declination form. Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination is kept at (List location).

Vaccination will be provided by (List health care professional responsible for this part of the plan) at (location).

Following the medical evaluation, a copy of the health care professional's written opinion will be obtained and provided to the employee within 15 days of the completion of the evaluation. It will be limited to whether the employee requires the hepatitis vaccine and whether the vaccine was administered.

POST-EXPOSURE EVALUATION AND FOLLOW-UP

Should an exposure incident occur, contact (Name of responsible person) at the following number _____.

An immediately available confidential medical evaluation and follow-up will be conducted by (name of licensed health care professional). Following initial first aid (clean the wound, flush eyes or other mucous membrane, etc.), the following activities will be performed:

- Document the routes of exposure and how the exposure occurred.
- Identify and document the source individual (unless the employer can establish that identification is infeasible or prohibited by state or local law).
- Obtain consent and make arrangements to have the source individual tested as soon as possible to determine HIV, HCV, and HBV infectivity; document that the source individual's test results were conveyed to the employee's health care provider.
- If the source individual is already known to be HIV, HCV and/or HBV positive, new testing need not be performed.
- Assure that the exposed employee is provided with the source individual's test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual (e.g., laws protecting confidentiality).
- After obtaining consent, collect exposed employee's blood as soon as feasible after exposure incident, and test blood for HBV and HIV serological status
- If the employee does not give consent for HIV serological testing during collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days; if the exposed employee elects to have the baseline sample tested during this waiting period, perform testing as soon as feasible.

ADMINISTRATION OF POST-EXPOSURE EVALUATION AND FOLLOW-UP

(Name of responsible person or department) ensures that health care professional(s) responsible for employee's hepatitis B vaccination and post-exposure evaluation and follow-up are given a copy of OSHA's bloodborne pathogens standard.

(Name of responsible person or department) ensures that the health care professional evaluating an employee after an exposure incident receives the following:

- a description of the employee's job duties relevant to the exposure incident
- route(s) of exposure
- circumstances of exposure
- if possible, results of the source individual's blood test
- relevant employee medical records, including vaccination status

(Name of responsible person or department) provides the employee with a copy of the evaluating health care professional's written opinion within 15 days after completion of the evaluation.

PROCEDURES FOR EVALUATING THE CIRCUMSTANCES SURROUNDING AN EXPOSURE INCIDENT

(Name of responsible person or department) will review the circumstances of all exposure incidents to determine:

- engineering controls in use at the time
- work practices followed
- a description of the device being used (including type and brand)
- protective equipment or clothing that was used at the time of the exposure incident (gloves, eye shields, etc.)
- location of the incident (O.R., E.R., patient room, etc.)
- procedure being performed when the incident occurred
- employee's training

(Name of Responsible Person) will record all percutaneous injuries from contaminated sharps in a Sharps Injury Log.

If revisions to this ECP are necessary (Responsible person or department) will ensure that appropriate changes are made. (Changes may include an evaluation of safer devices, adding employees to the exposure determination list, etc.)

EMPLOYEE TRAINING

All employees who have occupational exposure to bloodborne pathogens receive initial and annual training conducted by (Name of responsible person or department). (Attach a brief description of their qualifications.)

All employees who have occupational exposure to bloodborne pathogens receive training on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases. In addition, the training program covers, at a minimum, the following elements:

- a copy and explanation of the OSHA bloodborne pathogen standard
- an explanation of our ECP and how to obtain a copy
- an explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident
- an explanation of the use and limitations of engineering controls, work practices, and PPE
- an explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE
- an explanation of the basis for PPE selection
- information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge
- information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM
- an explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available
- information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident

- an explanation of the signs and labels and/or color coding required by the standard and used at this facility
- an opportunity for interactive questions and answers with the person conducting the training session.

Training materials for this facility are available at (name location).

RECORDKEEPING

Training Records

Training records are completed for each employee upon completion of training. These documents will be kept for at least three years at (Location of records).

The training records include:

- the dates of the training sessions
- the contents or a summary of the training sessions
- the names and qualifications of persons conducting the training
- the names and job titles of all persons attending the training sessions

Employee training records are provided upon request to the employee or the employee's authorized representative within 15 working days. Such requests should be addressed to (Name of responsible person or department).

Medical Records

Medical records are maintained for each employee with occupational exposure in accordance with 29 *CFR* 1910.1020, "Access to Employee Exposure and Medical Records."

(Name of Responsible person or department) is responsible for maintenance of the required medical records. These confidential records are kept in (List location) for at least the duration of employment plus 30 years.

Employee medical records are provided upon request of the employee or to anyone having written consent of the employee within 15 working days. Such requests should be sent to (Name of responsible person or department and address).

OSHA Recordkeeping

An exposure incident is evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 CFR 1904). This determination and the recording activities are done by (Name of responsible person or department).

Sharps Injury Log

In addition to the 1904 Recordkeeping Requirements, all percutaneous injuries from contaminated sharps are also recorded in a Sharps Injury Log. All incidences must include at least:

- date of the injury
- type and brand of the device involved (syringe, suture needle)
- department or work area where the incident occurred
- explanation of how the incident occurred.

This log is reviewed as part of the annual program evaluation and maintained for at least five years following the end of the calendar year covered. If a copy is requested by anyone, it must have any personal identifiers removed from the report.

HEPATITIS B VACCINE DECLINATION (MANDATORY)

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Signed: (Employee Name) Date: _____

The hazard communication standard requires you to develop a written hazard communication program. The following is a sample hazard communication program that you may use as a guide in developing your program.

Part 2 Hazard Communication Standard

The following model Hazard Communication Program is based on the requirements of the OSHA Hazard Communications Standard, 29 CFR 1910.1200. The intent of this model is to provide an easy-to-use format to tailor to the specific requirements of your establishment.

Model Hazard Communication Program

1. Company Policy

To ensure that information about the dangers of all hazardous chemicals used by (Name of Company) is known by all affected employees, the following hazardous information program has been established. Under this program, you will be informed of the contents of the OSHA Hazard Communications standard, the hazardous properties of chemicals with which you work, safe handling procedures and measures to take to protect yourself from these chemicals.

This program applies to all work operations in our company where you may be exposed to hazardous chemicals under normal working conditions or during an emergency situation. All work units of this company will participate in the Hazard Communication Program. Copies of the Hazard Communication Program are available in the (location) for review by any interested employee.

(Name of responsible person and/or position) is the program coordinator, with overall responsibility for the program, including reviewing and updating this plan as necessary.

2. Container Labeling

(Name of responsible person and/or position) will verify that all containers received for use will be clearly labeled as to the contents, note the appropriate hazard warning, and list the manufacturer's name and address.

The (name of responsible person and/or position) in each section will ensure that all secondary containers are labeled with either an extra copy of the original manufacturer's label or with labels marked with the identity and the appropriate hazard warning. For help with labeling, see (name of responsible person and/or position).

On the following individual stationary process containers, we are using (description of labeling system used) rather than a label to convey the required information:

(List containers here).

We are using an in-house labeling system that relies on (describe any in-house system which uses numbers or graphics to convey hazard information).

The (name of responsible person and/or position) will review the company labeling procedures every (provide a time period) and will update labels as required.

3. Material Safety Data Sheets (MSDSs)

The (name of responsible person and/or position) is responsible for establishing and monitoring the company MSDS program. He/she will ensure that procedures are developed to obtain the necessary MSDSs and will review incoming MSDSs for new or significant health and safety information. He/she will see that any new information is communicated to affected employees. The procedure below will be followed when an MSDS is not received at the time of initial shipment:

(Describe procedure to be followed here)

Copies of MSDSs for all hazardous chemicals to which employees are exposed or are potentially exposed will be kept in (identify location).

MSDSs will be readily available to all employees during each work shift. If an MSDS is not available, contact (name of responsible person and/or position).

MSDSs will be readily available to employees in each work area using the following format:

(Describe company format here)

Note: If an alternative to paper copies of MSDSs is used, describe the format and how employees can access them.

When revised MSDSs are received, the following procedures will be followed to replace old MSDSs:

(Describe procedures)

4. Employee Training and Information

(Name of responsible person and/or position) is responsible for the Hazard Communication Program and will ensure that all program elements are carried out.

Everyone who works with or is potentially exposed to hazardous chemicals will receive initial training on the hazard communication standard and this plan before starting work. Each new employee will attend a health and safety orientation that includes the following information and training:

- An overview of the OSHA hazard communication standard
- The hazardous chemicals present at his/her work area
- The physical and health risks of the hazardous chemicals
- Symptoms of overexposure
- How to determine the presence or release of hazardous chemicals in the work area
- How to reduce or prevent exposure to hazardous chemicals through use of control procedures, work practices and personal protective equipment
- Steps the company has taken to reduce or prevent exposure to hazardous chemicals
- Procedures to follow if employees are overexposed to hazardous chemicals
- How to read labels and MSDSs to obtain hazard information
- Location of the MSDS file and written Hazard Communication program

Prior to introducing a new chemical hazard into any section of this company, each employee in that section will be given information and training as outlined above for the new chemical hazard. The training format will be as follows:

(Describe training format, such as audiovisuals, interactive computer programs, classroom instruction, etc.)

5. Hazardous Non-routine Tasks

Periodically, employees are required to perform non-routine tasks that are hazardous. Examples of non-routine tasks are: confined space entry, tank cleaning, and painting reactor vessels.

Prior to starting work on such projects, each affected employee will be given information by (name of responsible person and/or position) about the hazardous chemicals he or she may encounter during such activity. This information will include specific chemical hazards, protective and safety measures the employee should use, and steps the company is taking to reduce the hazards, including ventilation, respirators, the presence of another employee (buddy systems), and emergency procedures.

Examples of non-routine tasks performed by employees of this company are:

<i>Task</i>	<i>Hazardous Chemical</i>
_____	_____
_____	_____
_____	_____
_____	_____

6. Informing Other Employers/Contractors

It is the responsibility of (Name of responsible person and/or position) to provide other employers and contractors with information about hazardous chemicals that their employees may be exposed to on a job site and suggested precautions for employees. It is the responsibility of (name of responsible person and/or position) to obtain information about hazardous chemicals used by other employers to which employees of this company may be exposed.

Other employers and contractors will be provided with MSDSs for hazardous chemicals generated by this company's operations in the following manner:

(Describe company policy here)

In addition to providing a copy of an MSDS to other employers, other employers will be informed of necessary precautionary measures to protect employees exposed to operations performed by this company.

Also, other employers will be informed of the hazard labels used by the company. If symbolic or numerical labeling systems are

used, the other employees will be provided with information to understand the labels used for hazardous chemicals for which their employees may have exposure.

7. List of Hazardous Chemicals

A list of all known hazardous chemicals used by our employees is attached to this plan. This list includes the name of the chemical, the manufacturer, the work area in which the chemical is used, dates of use, and quantity used. Further information on each chemical may be obtained from the MSDSs, located in (identify location).

When new chemicals are received, this list is updated (including date the chemicals were introduced) within 30 days. To ensure any new chemical is added in a timely manner, the following procedures shall be followed:

(Identify procedures to be followed)

The hazardous chemical inventory is compiled and maintained by (Name of responsible person and/or position and telephone number).

8. Chemicals in Unlabeled Pipes

Work activities are sometimes performed by employees in areas where chemicals are transferred through unlabeled pipes. Prior to starting work in these areas, the employee shall contact (name of responsible person and/or position) for information regarding:

- The chemical in the pipes
- Potential hazards
- Required safety precautions.

Include here the chemical list developed during the inventory. Arrange this list so that you are able to cross-reference it with your MSDS file and the labels on your containers. Additional useful information, such as the manufacturer's telephone number, an emergency number, scientific name, CAS number, the associated task, etc., can be included.

9. Program Availability

A copy of this program will be made available, upon request, to employees and their representatives.

OSHA assistance

OSHA can provide extensive help through a variety of programs, including technical assistance about effective safety and health programs, state plans, workplace consultations, voluntary protection programs, strategic partnerships, and training and education, and more. An overall commitment to workplace safety and health can add value to your business, to your workplace, and to your life.

Safety and health management system guidelines

Effective management of worker safety and health protection is a decisive factor in reducing the extent and severity of work-related injuries and illnesses and their related costs. In fact, an effective safety and health program forms the basis of good worker protection and can save time and money (about \$4 for every dollar spent) and increase productivity and reduce worker injuries, illnesses, and related worker compensation costs.

To assist employers and employees in developing effective safety and health programs, OSHA published recommended Safety and Health Program Management Guidelines (Federal Register 54 (16): 3904-3916, January 26, 1989). These voluntary guidelines can be applied to all places of employment covered by OSHA.

The guidelines identify four general elements critical to the development of a successful safety and health management system:

- Management leadership and employee involvement.
- Workplace analysis.
- Hazard prevention and control.
- Safety and health training.

The guidelines recommend specific actions, under each of these general elements, to achieve an effective safety and health program. The Federal Register notice is available online at www.osha.gov.

State programs

There are 26 state plans and jurisdictions that operate their own occupational safety and health programs under plans approved by OSHA (23 cover both the private sector and state and local government employees, and three cover public employees only). These “state plan states” have standards which are identical to or at least as effective as federal OSHA standards, including the bloodborne pathogens and hazard communications standards. State plan states are required to extend their coverage to state and local government workers, including health care workers.

Additional information about state plans, and a list of those programs including contact information are available on OSHA’s website.

OSHA consultation services

Consultation assistance is available on request to employers who want help in establishing and maintaining a safe and healthful workplace. Largely funded by OSHA, the service is provided at no cost to the employer. Primarily developed for smaller employers with more hazardous operations, the consultation service is delivered by state governments employing professional safety and health consultants. Comprehensive assistance includes an appraisal of all-mechanical systems, work practices, and occupational safety and health hazards of the workplace and all aspects of the employer’s present job safety and health program. In addition, the service offers assistance to employers in developing and implementing an effective safety and health program. No penalties are proposed or citations issued for hazards identified by the consultant. OSHA provides consultation assistance to the employer with the assurance that his or her name and firm and any information about the workplace will not be routinely reported to OSHA enforcement staff.

Under the consultation program, certain exemplary employers may request participation in OSHA’s Safety and Health Achievement Recognition Program (SHARP). Eligibility for participation in SHARP includes receiving a comprehensive consultation visit, demonstrating exemplary achievements in workplace safety

and health by abating all identified hazards, and developing an excellent safety and health program.

Employers accepted into SHARP may receive an exemption from programmed inspections (not complaint or accident investigation inspections) for a period of one year. For more information concerning consultation assistance, see the list of consultation projects listed at the end of this publication.

The OSHA Voluntary Protection Program (VPP)

Voluntary Protection Programs and onsite consultation services, when coupled with an effective enforcement program, expand worker protection to help meet the goals of the OSH Act. The three VPP program levels include Star, Merit, and Demonstration and are designed to recognize outstanding achievements by companies that have successfully incorporated comprehensive safety and health programs into their total management system. The VPP motivate others to achieve excellent safety and health results in the same outstanding way as they establish a cooperative relationship between employers, employees, and OSHA.

For additional information on VPP and how to apply, contact the OSHA regional offices listed at the end of this publication.

Strategic Partnership Programs

OSHA's Strategic Partnership Program, the newest member of OSHA's cooperative programs, helps encourage, assist, and recognize the efforts of partners to eliminate serious workplace hazards and achieve a high level of worker safety and health. Whereas OSHA's Consultation Program and VPP entail one-on-one relationships between OSHA and individual work sites, most strategic partnerships seek to have a broader impact by building cooperative relationships with groups of employers and employees. These partnerships are voluntary, cooperative relationships between OSHA, employers, employee representatives, and others (e.g., trade unions, trade and professional associations, universities, and other government agencies).

For more information on this and other cooperative programs, contact your nearest OSHA office, or visit www.osha.gov.

The OSHA Alliance Program

Alliances enable organizations committed to workplace safety and health to collaborate with OSHA to prevent injuries and illnesses in the workplace. OSHA and its allies work together to reach out to, educate, and lead the nation's employers and their employees in improving and advancing workplace safety and health.

Alliances are open to all, including trade or professional organizations, businesses, labor organizations, educational institutions, and government agencies. In some cases, organizations may be building on existing relationships with OSHA through other cooperative programs.

There are few formal program requirements for alliances, which are less structured than other cooperative agreements, and the agreements do not include an enforcement component. However, OSHA and the participating organizations must define, implement, and meet a set of short- and long-term goals that fall into three categories: training and education; outreach and communication; and promotion of the national dialogue on workplace safety and health.

OSHA training and education

OSHA area offices offer a variety of information services, such as compliance assistance, technical advice, publications, audiovisual aids and speakers for special engagements. OSHA's Training Institute in Des Plaines, IL, provides basic and advanced courses in safety and health for federal and state compliance officers, state consultants, federal agency personnel, and private sector employers, employees, and their representatives.

The OSHA Training Institute also has established OSHA Training Institute Education Centers to address the increased demand for its courses from the private sector and from other federal agencies. These centers are nonprofit colleges, universities, and other organizations that have been selected after a competition for participation in the program.

OSHA also provides funds to nonprofit organizations, through grants, to conduct workplace training and education in subjects where OSHA believes there is a lack of workplace training. Grants are awarded annually. Grant recipients are expected to contribute 20 percent of the total grant cost.

For more information on grants, training, and education, contact the OSHA Training Institute, Office of Training and Education, 1555 Times Drive, Des Plaines, IL 60018, (847) 297-4810. For further information on any OSHA program, contact your nearest OSHA area or regional office listed at the end of this publication.

Information available electronically

OSHA has a variety of materials and tools available on its website at www.osha.gov. These include e-Tools such as Expert Advisors, Electronic Compliance Assistance Tools (e-cats), Technical Links; regulations, directives, publications; videos, and other information for employers and employees. OSHA's software programs and compliance assistance tools walk you through challenging safety and health issues and common problems to find the best solutions for your workplace.

OSHA publications

OSHA has an extensive publications program. For a listing of free or sales items, visit OSHA's website at www.osha.gov or contact the OSHA Publications Office, U.S. Department of Labor, 200 Constitution Avenue NW, N-3101, Washington, DC 20210. Telephone (202) 693-1888 or fax to (202) 693-2498.

Contacting OSHA

To report an emergency, file a complaint, or seek OSHA advice, assistance, or products, call (800) 321-OSHA or contact your nearest OSHA regional or area office listed at the end of this publication. The teletypewriter (TTY) number is (877) 889-5627.

You can also file a complaint online and obtain more information on OSHA federal and state programs by visiting OSHA's website at www.osha.gov.

For more information on grants, training, and education, contact the OSHA Training Institute, Office of Training and Education, 1555 Times Drive, Des Plaines, IL 60018, (847) 297-4810, or see Outreach on OSHA's website at www.osha.gov.

OSHA Regional Offices

Region I

(CT,* ME, MA, NH, RI, VT*)
Boston, MA 02203
(617) 565-9860

Region II

(NJ,* NY,* PR,* VI*)
201 Varick Street, Room 670
New York, NY 10014
(212) 337-2378

Region III

(DE, DC, MD,* PA,* VA,* WV)
The Curtis Center
170 S. Independence Mall West
Suite 740 West
Philadelphia, PA 19106-3309
(215) 861-4900

Region IV

(AL, FL, GA, KY,* MS, NC,* SC,* TN*)
Atlanta Federal Center
61 Forsyth Street SW, Room 6T50
Atlanta, GA 30303
(404) 562-2300

Region V

(IL, IN,* MI,* MN,* OH, WI)
230 South Dearborn Street,
Room 3244
Chicago, IL 60604
(312) 353-2220

Region VI

(AR, LA, NM,* OK, TX)
525 Griffin Street, Room 602
Dallas, TX 75202
(214) 767-4731 or 4736 x224

Region VII

(IA,* KS, MO, NE)
City Center Square
1100 Main Street, Suite 800
Kansas City, MO 64105
(816) 426-5861

Region VIII

(CO, MT, ND, SD, UT,* WY*)
1999 Broadway, Suite 1690
PO Box 46550
Denver, CO 80202-5716
(303) 844-1600

Region IX

(American Samoa, AZ,* CA,* HI,
NV,* Northern Mariana Islands)
71 Stevenson Street, Room 420
San Francisco, CA 94105
(415) 975-4310

Region X

(AK,* ID, OR,* WA*)
1111 Third Avenue, Suite 715
Seattle, WA 98101-3212
(206) 553-5930

*These states and territories operate their own OSHA-approved job safety and health programs (Connecticut, New Jersey, and New York plans cover public employees only). States with approved programs must have a standard that is identical to, or at least as effective as, the federal standard.

Note: To get contact information for OSHA Area Offices, OSHA-approved state plans, and OSHA Consultation Projects, please visit us online at www.osha.gov or call us at (800) 321-OSHA.



UNITED STATES DEPARTMENT OF LABOR
OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION

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Regulations (Standards - 29 CFR)

Hazard Communication. - 1910.1200

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● Part Number:	1910
● Part Title:	Occupational Safety and Health Standards
● Subpart:	Z
● Subpart Title:	Toxic and Hazardous Substances
● Standard Number:	<u>1910.1200</u>
● Title:	Hazard Communication.
● Appendix:	A , B , C , D , E

1910.1200(a)

"Purpose."

1910.1200(a)(1)

The purpose of this section is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets and employee training.

..1910.1200(a)(2)

1910.1200(a)(2)

This occupational safety and health standard is intended to address comprehensively the issue of evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, and to preempt any legal requirements of a state, or political subdivision of a state, pertaining to this subject. Evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, may include, for example, but is not limited to, provisions for: developing and maintaining a written hazard communication program for the workplace, including lists of hazardous chemicals present; labeling of containers of chemicals in the workplace, as well as of containers of chemicals being shipped to other workplaces; preparation and distribution of material safety data sheets to employees and downstream employers; and development and implementation of employee training programs regarding hazards of chemicals and protective measures. Under section 18 of the Act, no state or political subdivision of a state may adopt or enforce, through any court or agency, any requirement relating to the issue addressed by this Federal standard,

except pursuant to a Federally-approved state plan.

1910.1200(b)

"Scope and application."

1910.1200(b)(1)

This section requires chemical manufacturers or importers to assess the hazards of chemicals which they produce or import, and all employers to provide information to their employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels and other forms of warning, material safety data sheets, and information and training. In addition, this section requires distributors to transmit the required information to employers. (Employers who do not produce or import chemicals need only focus on those parts of this rule that deal with establishing a workplace program and communicating information to their workers. Appendix E of this section is a general guide for such employers to help them determine their compliance obligations under the rule.)

1910.1200(b)(2)

This section applies to any chemical which is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.

1910.1200(b)(3)

This section applies to laboratories only as follows:

1910.1200(b)(3)(i)

Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced;

..1910.1200(b)(3)(ii)

1910.1200(b)(3)(ii)

Employers shall maintain any material safety data sheets that are received with incoming shipments of hazardous chemicals, and ensure that they are readily accessible during each workshift to laboratory employees when they are in their work areas;

1910.1200(b)(3)(iii)

Employers shall ensure that laboratory employees are provided information and training in accordance with paragraph (h) of this section, except for the location and availability of the written hazard communication program under paragraph (h)(2)(iii) of this section; and,

1910.1200(b)(3)(iv)

Laboratory employers that ship hazardous chemicals are considered to be either a chemical manufacturer or a distributor under this rule, and thus must ensure that any containers of hazardous chemicals leaving the laboratory are labeled in accordance with paragraph (f)(1) of this section, and that a material safety data sheet is provided to distributors and other employers in accordance with paragraphs (g)(6) and (g)(7) of this section.

1910.1200(b)(4)

In work operations where employees only handle chemicals in sealed containers which are not opened under normal conditions of use (such as are found in marine cargo handling, warehousing, or retail sales), this section applies to these operations only as follows:

1910.1200(b)(4)(i)

Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced;

..1910.1200(b)(4)(ii)

1910.1200(b)(4)(ii)

Employers shall maintain copies of any material safety data sheets that are received with incoming shipments of the sealed containers of hazardous chemicals, shall obtain a material safety data sheet as soon as possible for sealed containers of hazardous chemicals received without a material safety data sheet if an employee requests the material safety data sheet, and shall ensure that the material safety data sheets are readily accessible during each work shift to employees when they are in their work area(s); and,

1910.1200(b)(4)(iii)

Employers shall ensure that employees are provided with information and training in accordance with paragraph (h) of this section (except for the location and availability of the written hazard communication program under paragraph (h)(2)(iii) of this section), to the extent necessary to protect them in the event of a spill or leak of a hazardous chemical from a sealed container.

1910.1200(b)(5)

This section does not require labeling of the following chemicals:

1910.1200(b)(5)(i)

Any pesticide as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.), when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

1910.1200(b)(5)(ii)

Any chemical substance or mixture as such terms are defined in the Toxic Substances Control Act (15 U.S.C. 2601 et seq.), when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

..1910.1200(b)(5)(iii)

1910.1200(b)(5)(iii)

Any food, food additive, color additive, drug, cosmetic, or medical or veterinary device or product, including materials intended for use as ingredients in such products (e.g. flavors and fragrances), as such terms are defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.) or the Virus-Serum-Toxin Act of 1913 (21 U.S.C. 151 et seq.), and regulations issued under those Acts, when they are subject to the labeling requirements under those Acts by either the Food and Drug Administration or the Department of Agriculture;

1910.1200(b)(5)(iv)

Any distilled spirits (beverage alcohols), wine, or malt beverage intended for nonindustrial use, as such terms are defined in the Federal Alcohol Administration Act (27 U.S.C. 201 et seq.) and regulations issued under that Act, when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Bureau of Alcohol, Tobacco, and Firearms;

1910.1200(b)(5)(v)

Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission; and,

1910.1200(b)(5)(vi)

Agricultural or vegetable seed treated with pesticides and labeled in accordance with the Federal Seed Act (7 U.S.C. 1551 et seq.) and the labeling regulations issued under that Act by the Department of Agriculture.

..1910.1200(b)(6)

1910.1200(b)(6)

This section does not apply to:

1910.1200(b)(6)(i)

Any hazardous waste as such term is defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 et seq.), when subject to regulations

issued under that Act by the Environmental Protection Agency;

1910.1200(b)(6)(ii)

Any hazardous substance as such term is defined by the Comprehensive Environmental Response, Compensation and Liability ACT (CERCLA) (42 U.S.C. 9601 et seq.) when the hazardous substance is the focus of remedial or removal action being conducted under CERCLA in accordance with the Environmental Protection Agency regulations.

1910.1200(b)(6)(iii)

Tobacco or tobacco products;

1910.1200(b)(6)(iv)

Wood or wood products, including lumber which will not be processed, where the chemical manufacturer or importer can establish that the only hazard they pose to employees is the potential for flammability or combustibility (wood or wood products which have been treated with a hazardous chemical covered by this standard, and wood which may be subsequently sawed or cut, generating dust, are not exempted);

1910.1200(b)(6)(v)

Articles (as that term is defined in paragraph (c) of this section);

1910.1200(b)(6)(vi)

Food or alcoholic beverages which are sold, used, or prepared in a retail establishment (such as a grocery store, restaurant, or drinking place), and foods intended for personal consumption by employees while in the workplace;

..1910.1200(b)(6)(vii)

1910.1200(b)(6)(vii)

Any drug, as that term is defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.), when it is in solid, final form for direct administration to the patient (e.g., tablets or pills); drugs which are packaged by the chemical manufacturer for sale to consumers in a retail establishment (e.g., over-the-counter drugs); and drugs intended for personal consumption by employees while in the workplace (e.g., first aid supplies);

1910.1200(b)(6)(viii)

Cosmetics which are packaged for sale to consumers in a retail establishment, and cosmetics intended for personal consumption by employees while in the workplace;

1910.1200(b)(6)(ix)

Any consumer product or hazardous substance, as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, where the employer can show that it is used in the workplace for the purpose intended by the chemical manufacturer or importer of the product, and the use results in a duration and frequency of exposure which is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended;

1910.1200(b)(6)(x)

Nuisance particulates where the chemical manufacturer or importer can establish that they do not pose any physical or health hazard covered under this section;

1910.1200(b)(6)(xi)

Ionizing and nonionizing radiation; and,

1910.1200(b)(6)(xii)

Biological hazards.

1910.1200(c)

"Definitions."

"Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

"Assistant Secretary" means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

"Chemical" means any element, chemical compound or mixture of elements and/or compounds.

"Chemical manufacturer" means an employer with a workplace where chemical(s) are produced for use or distribution.

"Chemical name" means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation.

"Combustible liquid" means any liquid having a flashpoint at or above 100 deg. F (37.8 deg. C), but below 200 deg. F (93.3 deg. C), except any mixture having components with flashpoints of 200 deg. F (93.3 deg. C),

or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

"Commercial account" means an arrangement whereby a retail distributor sells hazardous chemicals to an employer, generally in large quantities over time and/or at costs that are below the regular retail price.

"Common name" means any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

"Compressed gas" means:

(i) A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70 deg. F (21.1 deg. C); or

(ii) A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130 deg. F (54.4 deg. C) regardless of the pressure at 70 deg. F (21.1 deg. C); or

(iii) A liquid having a vapor pressure exceeding 40 psi at 100 deg. F (37.8 deg. C) as determined by ASTM D-323-72.

"Container" means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

"Designated representative" means any individual or organization to whom an employee gives written authorization to exercise such employee's rights under this section. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

"Director" means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

"Distributor" means a business, other than a chemical manufacturer or importer, which supplies hazardous chemicals to other distributors or to employers.

"Employee" means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

"Employer" means a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

"Explosive" means a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

"Exposure or exposed" means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g. accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption.)

"Flammable" means a chemical that falls into one of the following categories:

(i) "Aerosol, flammable" means an aerosol that, when tested by the method described in 16 CFR 1500.45, yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening;

(ii) "Gas, flammable" means: (A) A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of thirteen (13) percent by volume or less; or

(B) A gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than twelve (12) percent by volume, regardless of the lower limit;

(iii) "Liquid, flammable" means any liquid having a flashpoint below 100 deg. F (37.8 deg. C), except any mixture having components with flashpoints of 100 deg. F (37.8 deg. C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.

(iv) "Solid, flammable" means a solid, other than a blasting agent or explosive as defined in 1910.109(a), that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be considered to be a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second along its major axis.

"Flashpoint" means the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested as follows:

(i) Tagliabue Closed Tester (See American National Standard Method of Test for Flash Point by Tag Closed Tester, Z11.24-1979 (ASTM D 56-79)) for liquids with a viscosity of less than 45 Saybolt Universal Seconds (SUS) at 100 deg. F (37.8 deg. C), that do not contain suspended solids and do not have a tendency to form a surface film under test; or

(ii) Pensky-Martens Closed Tester (see American National Standard Method of Test for Flash Point by Pensky-Martens Closed Tester, Z11.7-1979 (ASTM D 93-79)) for liquids with a viscosity equal to or greater than 45 SUS at 100 deg. F (37.8 deg. C), or that contain suspended solids, or that have a tendency to form a surface film under test; or

(iii) Setaflash Closed Tester (see American National Standard Method of Test for Flash Point by Setaflash Closed Tester (ASTM D 3278-78)).

Organic peroxides, which undergo autoaccelerating thermal decomposition, are excluded from any of the flashpoint determination methods specified above.

"Foreseeable emergency" means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.

"Hazardous chemical" means any chemical which is a physical hazard or a health hazard.

"Hazard warning" means any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the specific physical and health hazard(s), including target organ effects, of the chemical(s) in the container(s). (See the definitions for "physical hazard" and "health hazard" to determine the hazards which must be covered.)

"Health hazard" means 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. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. Appendix A provides further definitions and explanations of the scope of health hazards covered by this section, and Appendix B describes the criteria to be used to determine whether or not a chemical is to be considered hazardous for purposes of this standard.

"Identity" means any chemical or common name which is indicated on the material safety data sheet (MSDS) for the chemical. The identity used shall permit cross-references to be made among the required list of hazardous chemicals, the label and the MSDS.

"Immediate use" means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

"Importer" means the first business with employees within the Customs Territory of the United States which receives hazardous chemicals produced in other countries for the purpose of supplying them to distributors or employers within the United States.

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

"Material safety data sheet (MSDS)" means written or printed material concerning a hazardous chemical which is prepared in accordance with paragraph (g) of this section.

"Mixture" means any combination of two or more chemicals if the

combination is not, in whole or in part, the result of a chemical reaction.

"Organic peroxide" means an organic compound that contains the bivalent -O-O-structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

"Oxidizer" means a chemical other than a blasting agent or explosive as defined in 1910.109(a), that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

"Physical hazard" means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

"Produce" means to manufacture, process, formulate, blend, extract, generate, emit, or repackage.

"Pyrophoric" means a chemical that will ignite spontaneously in air at a temperature of 130 deg. F (54.4 deg. C) or below.

"Responsible party" means someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

"Specific chemical identity" means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

"Trade secret" means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix D sets out the criteria to be used in evaluating trade secrets.

"Unstable (reactive)" means a chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure or temperature.

"Use" means to package, handle, react, emit, extract, generate as a byproduct, or transfer.

"Water-reactive" means a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

"Work area" means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

"Workplace" means an establishment, job site, or project, at one geographical location containing one or more work areas.

..1910.1200(d)**1910.1200(d)**

"Hazard determination."

1910.1200(d)(1)

Chemical manufacturers and importers shall evaluate chemicals produced in their workplaces or imported by them to determine if they are hazardous. Employers are not required to evaluate chemicals unless they choose not to rely on the evaluation performed by the chemical manufacturer or importer for the chemical to satisfy this requirement.

1910.1200(d)(2)

Chemical manufacturers, importers or employers evaluating chemicals shall identify and consider the available scientific evidence concerning such hazards. For health hazards, evidence which is statistically significant and which is based on at least one positive study conducted in accordance with established scientific principles is considered to be sufficient to establish a hazardous effect if the results of the study meet the definitions of health hazards in this section. Appendix A shall be consulted for the scope of health hazards covered, and Appendix B shall be consulted for the criteria to be followed with respect to the completeness of the evaluation, and the data to be reported.

1910.1200(d)(3)

The chemical manufacturer, importer or employer evaluating chemicals shall treat the following sources as establishing that the chemicals listed in them are hazardous:

1910.1200(d)(3)(i)

29 CFR part 1910, subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA); or,

..1910.1200(d)(3)(ii)**1910.1200(d)(3)(ii)**

"Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment," American Conference of Governmental Industrial Hygienists (ACGIH) (latest edition). The chemical manufacturer, importer, or employer is still responsible for evaluating the hazards associated with the chemicals in these source lists in accordance with the requirements of this standard.

1910.1200(d)(4)

Chemical manufacturers, importers and employers evaluating chemicals shall treat the following sources as establishing that a chemical is a carcinogen or potential carcinogen for hazard communication purposes:

1910.1200(d)(4)(i)

National Toxicology Program (NTP), "Annual Report on Carcinogens" (latest edition);

1910.1200(d)(4)(ii)

International Agency for Research on Cancer (IARC) "Monographs" (latest editions); or

1910.1200(d)(4)(iii)

29 CFR part 1910, subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration.

Note: The "Registry of Toxic Effects of Chemical Substances" published by the National Institute for Occupational Safety and Health indicates whether a chemical has been found by NTP or IARC to be a potential carcinogen.

1910.1200(d)(5)

The chemical manufacturer, importer or employer shall determine the hazards of mixtures of chemicals as follows:

1910.1200(d)(5)(i)

If a mixture has been tested as a whole to determine its hazards, the results of such testing shall be used to determine whether the mixture is hazardous;

..1910.1200(d)(5)(ii)**1910.1200(d)(5)(ii)**

If a mixture has not been tested as a whole to determine whether the mixture is a health hazard, the mixture shall be assumed to present the same health hazards as do the components which comprise one percent (by weight or volume) or greater of the mixture, except that the mixture shall be assumed to present a carcinogenic hazard if it contains a component in concentrations of 0.1 percent or greater which is considered to be a carcinogen under paragraph (d)(4) of this section;

1910.1200(d)(5)(iii)

If a mixture has not been tested as a whole to determine whether the mixture is a physical hazard, the chemical manufacturer, importer, or employer may use whatever scientifically valid data is available to evaluate the physical hazard potential of the mixture; and,

1910.1200(d)(5)(iv)

If the chemical manufacturer, importer, or employer has evidence to indicate that a component present in the mixture in concentrations of less

than one percent (or in the case of carcinogens, less than 0.1 percent) could be released in concentrations which would exceed an established OSHA permissible exposure limit or ACGIH Threshold Limit Value, or could present a health risk to employees in those concentrations, the mixture shall be assumed to present the same hazard.

1910.1200(d)(6)

Chemical manufacturers, importers, or employers evaluating chemicals shall describe in writing the procedures they use to determine the hazards of the chemical they evaluate. The written procedures are to be made available, upon request, to employees, their designated representatives, the Assistant Secretary and the Director. The written description may be incorporated into the written hazard communication program required under paragraph (e) of this section.

..1910.1200(e)

1910.1200(e)

"Written hazard communication program."

1910.1200(e)(1)

Employers shall develop, implement, and maintain at each workplace, a written hazard communication program which at least describes how the criteria specified in paragraphs (f), (g), and (h) of this section for labels and other forms of warning, material safety data sheets, and employee information and training will be met, and which also includes the following:

1910.1200(e)(1)(i)

A list of the hazardous chemicals known to be present using an identity that is referenced on the appropriate material safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas); and,

1910.1200(e)(1)(ii)

The methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with chemicals contained in unlabeled pipes in their work areas.

1910.1200(e)(2)

"Multi-employer workplaces." Employers who produce, use, or store hazardous chemicals at a workplace in such a way that the employees of other employer(s) may be exposed (for example, employees of a construction contractor working on-site) shall additionally ensure that the hazard communication programs developed and implemented under this paragraph (e) include the following:

1910.1200(e)(2)(i)

The methods the employer will use to provide the other employer(s) on-site access to material safety data sheets for each hazardous chemical the other employer(s)' employees may be exposed to while working;

..1910.1200(e)(2)(ii)**1910.1200(e)(2)(ii)**

The methods the employer will use to inform the other employer(s) of any precautionary measures that need to be taken to protect employees during the workplace's normal operating conditions and in foreseeable emergencies; and,

1910.1200(e)(2)(iii)

The methods the employer will use to inform the other employer(s) of the labeling system used in the workplace.

1910.1200(e)(3)

The employer may rely on an existing hazard communication program to comply with these requirements, provided that it meets the criteria established in this paragraph (e).

1910.1200(e)(4)

The employer shall make the written hazard communication program available, upon request, to employees, their designated representatives, the Assistant Secretary and the Director, in accordance with the requirements of 29 CFR 1910.1020 (e).

1910.1200(e)(5)

Where employees must travel between workplaces during a workshift, i.e., their work is carried out at more than one geographical location, the written hazard communication program may be kept at the primary workplace facility.

1910.1200(f)

"Labels and other forms of warning."

1910.1200(f)(1)

The chemical manufacturer, importer, or distributor shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged or marked with the following information:

..1910.1200(f)(1)(i)**1910.1200(f)(1)(i)**

Identity of the hazardous chemical(s);

1910.1200(f)(1)(ii)

Appropriate hazard warnings; and

1910.1200(f)(1)(iii)

Name and address of the chemical manufacturer, importer, or other responsible party.

1910.1200(f)(2)

1910.1200(f)(2)(i)

For solid metal (such as a steel beam or a metal casting), solid wood, or plastic items that are not exempted as articles due to their downstream use, or shipments of whole grain, the required label may be transmitted to the customer at the time of the initial shipment, and need not be included with subsequent shipments to the same employer unless the information on the label changes;

1910.1200(f)(2)(ii)

The label may be transmitted with the initial shipment itself, or with the material safety data sheet that is to be provided prior to or at the time of the first shipment; and,

1910.1200(f)(2)(iii)

This exception to requiring labels on every container of hazardous chemicals is only for the solid material itself, and does not apply to hazardous chemicals used in conjunction with, or known to be present with, the material and to which employees handling the items in transit may be exposed (for example, cutting fluids or pesticides in grains).

..1910.1200(f)(3)

1910.1200(f)(3)

Chemical manufacturers, importers, or distributors shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged, or marked in accordance with this section in a manner which does not conflict with the requirements of the Hazardous Materials Transportation Act (49 U.S.C. 1801 et seq.) and regulations issued under that Act by the Department of Transportation.

1910.1200(f)(4)

If the hazardous chemical is regulated by OSHA in a substance-specific health standard, the chemical manufacturer, importer, distributor or employer shall ensure that the labels or other forms of warning used are in accordance with the requirements of that standard.

1910.1200(f)(5)

Except as provided in paragraphs (f)(6) and (f)(7) of this section, the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with the following information:

1910.1200(f)(5)(i)

Identity of the hazardous chemical(s) contained therein; and,

1910.1200(f)(5)(ii)

Appropriate hazard warnings, or alternatively, words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

..1910.1200(f)(6)**1910.1200(f)(6)**

The employer may use signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it is applicable and conveys the information required by paragraph (f)(5) of this section to be on a label. The written materials shall be readily accessible to the employees in their work area throughout each work shift.

1910.1200(f)(7)

The employer is not required to label portable containers into which hazardous chemicals are transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer. For purposes of this section, drugs which are dispensed by a pharmacy to a health care provider for direct administration to a patient are exempted from labeling.

1910.1200(f)(8)

The employer shall not remove or deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.

1910.1200(f)(9)

The employer shall ensure that labels or other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift. Employers having employees who speak other languages may add the information in their language to the material presented, as long as the information is

presented in English as well.

1910.1200(f)(10)

The chemical manufacturer, importer, distributor or employer need not affix new labels to comply with this section if existing labels already convey the required information.

..1910.1200(f)(11)

1910.1200(f)(11)

Chemical manufacturers, importers, distributors, or employers who become newly aware of any significant information regarding the hazards of a chemical shall revise the labels for the chemical within three months of becoming aware of the new information. Labels on containers of hazardous chemicals shipped after that time shall contain the new information. If the chemical is not currently produced or imported, the chemical manufacturer, importers, distributor, or employer shall add the information to the label before the chemical is shipped or introduced into the workplace again.

1910.1200(g)

"Material safety data sheets."

1910.1200(g)(1)

Chemical manufacturers and importers shall obtain or develop a material safety data sheet for each hazardous chemical they produce or import. Employers shall have a material safety data sheet in the workplace for each hazardous chemical which they use.

1910.1200(g)(2)

Each material safety data sheet shall be in English (although the employer may maintain copies in other languages as well), and shall contain at least the following information:

1910.1200(g)(2)(i)

The identity used on the label, and, except as provided for in paragraph (i) of this section on trade secrets:

1910.1200(g)(2)(i)(A)

If the hazardous chemical is a single substance, its chemical and common name(s);

1910.1200(g)(2)(i)(B)

If the hazardous chemical is a mixture which has been tested as a whole to determine its hazards, the chemical and common name(s) of the ingredients which contribute to these known hazards, and the common

name(s) of the mixture itself; or,

1910.1200(g)(2)(i)(C)

If the hazardous chemical is a mixture which has not been tested as a whole:

..1910.1200(g)(2)(i)(C)(1)

1910.1200(g)(2)(i)(C)(1)

The chemical and common name(s) of all ingredients which have been determined to be health hazards, and which comprise 1% or greater of the composition, except that chemicals identified as carcinogens under paragraph (d) of this section shall be listed if the concentrations are 0.1% or greater; and,

1910.1200(g)(2)(i)(C)(2)

The chemical and common name(s) of all ingredients which have been determined to be health hazards, and which comprise less than 1% (0.1% for carcinogens) of the mixture, if there is evidence that the ingredient(s) could be released from the mixture in concentrations which would exceed an established OSHA permissible exposure limit or ACGIH Threshold Limit Value, or could present a health risk to employees; and,

1910.1200(g)(2)(i)(C)(3)

The chemical and common name(s) of all ingredients which have been determined to present a physical hazard when present in the mixture;

1910.1200(g)(2)(ii)

Physical and chemical characteristics of the hazardous chemical (such as vapor pressure, flash point);

1910.1200(g)(2)(iii)

The physical hazards of the hazardous chemical, including the potential for fire, explosion, and reactivity;

1910.1200(g)(2)(iv)

The health hazards of the hazardous chemical, including signs and symptoms of exposure, and any medical conditions which are generally recognized as being aggravated by exposure to the chemical;

1910.1200(g)(2)(v)

The primary route(s) of entry;

..1910.1200(g)(2)(vi)

1910.1200(g)(2)(vi)

The OSHA permissible exposure limit, ACGIH Threshold Limit Value, and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the material safety data sheet, where available;

1910.1200(g)(2)(vii)

Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Annual Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest editions), or by OSHA;

1910.1200(g)(2)(viii)

Any generally applicable precautions for safe handling and use which are known to the chemical manufacturer, importer or employer preparing the material safety data sheet, including appropriate hygienic practices, protective measures during repair and maintenance of contaminated equipment, and procedures for clean-up of spills and leaks;

1910.1200(g)(2)(ix)

Any generally applicable control measures which are known to the chemical manufacturer, importer or employer preparing the material safety data sheet, such as appropriate engineering controls, work practices, or personal protective equipment;

1910.1200(g)(2)(x)

Emergency and first aid procedures;

1910.1200(g)(2)(xi)

The date of preparation of the material safety data sheet or the last change to it; and,

..1910.1200(g)(2)(xii)

1910.1200(g)(2)(xii)

The name, address and telephone number of the chemical manufacturer, importer, employer or other responsible party preparing or distributing the material safety data sheet, who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

1910.1200(g)(3)

If no relevant information is found for any given category on the material safety data sheet, the chemical manufacturer, importer or employer preparing the material safety data sheet shall mark it to indicate that no applicable information was found.

1910.1200(g)(4)

Where complex mixtures have similar hazards and contents (i.e. the chemical ingredients are essentially the same, but the specific composition varies from mixture to mixture), the chemical manufacturer, importer or employer may prepare one material safety data sheet to apply to all of these similar mixtures.

1910.1200(g)(5)

The chemical manufacturer, importer or employer preparing the material safety data sheet shall ensure that the information recorded accurately reflects the scientific evidence used in making the hazard determination. If the chemical manufacturer, importer or employer preparing the material safety data sheet becomes newly aware of any significant information regarding the hazards of a chemical, or ways to protect against the hazards, this new information shall be added to the material safety data sheet within three months. If the chemical is not currently being produced or imported the chemical manufacturer or importer shall add the information to the material safety data sheet before the chemical is introduced into the workplace again.

..1910.1200(g)(6)

1910.1200(g)(6)

1910.1200(g)(6)(i)

Chemical manufacturers or importers shall ensure that distributors and employers are provided an appropriate material safety data sheet with their initial shipment, and with the first shipment after a material safety data sheet is updated;

1910.1200(g)(6)(ii)

The chemical manufacturer or importer shall either provide material safety data sheets with the shipped containers or send them to the distributor or employer prior to or at the time of the shipment;

1910.1200(g)(6)(iii)

If the material safety data sheet is not provided with a shipment that has been labeled as a hazardous chemical, the distributor or employer shall obtain one from the chemical manufacturer or importer as soon as possible; and,

1910.1200(g)(6)(iv)

The chemical manufacturer or importer shall also provide distributors or employers with a material safety data sheet upon request.

1910.1200(g)(7)

1910.1200(g)(7)(i)

Distributors shall ensure that material safety data sheets, and updated

information, are provided to other distributors and employers with their initial shipment and with the first shipment after a material safety data sheet is updated;

1910.1200(g)(7)(ii)

The distributor shall either provide material safety data sheets with the shipped containers, or send them to the other distributor or employer prior to or at the time of the shipment;

..1910.1200(g)(7)(iii)

1910.1200(g)(7)(iii)

Retail distributors selling hazardous chemicals to employers having a commercial account shall provide a material safety data sheet to such employers upon request, and shall post a sign or otherwise inform them that a material safety data sheet is available;

1910.1200(g)(7)(iv)

Wholesale distributors selling hazardous chemicals to employers over-the-counter may also provide material safety data sheets upon the request of the employer at the time of the over-the-counter purchase, and shall post a sign or otherwise inform such employers that a material safety data sheet is available;

1910.1200(g)(7)(v)

If an employer without a commercial account purchases a hazardous chemical from a retail distributor not required to have material safety data sheets on file (i.e., the retail distributor does not have commercial accounts and does not use the materials), the retail distributor shall provide the employer, upon request, with the name, address, and telephone number of the chemical manufacturer, importer, or distributor from which a material safety data sheet can be obtained;

1910.1200(g)(7)(vi)

Wholesale distributors shall also provide material safety data sheets to employers or other distributors upon request; and,

1910.1200(g)(7)(vii)

Chemical manufacturers, importers, and distributors need not provide material safety data sheets to retail distributors that have informed them that the retail distributor does not sell the product to commercial accounts or open the sealed container to use it in their own workplaces.

..1910.1200(g)(8)

1910.1200(g)(8)

The employer shall maintain in the workplace copies of the required

material safety data sheets for each hazardous chemical, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s). (Electronic access, microfiche, and other alternatives to maintaining paper copies of the material safety data sheets are permitted as long as no barriers to immediate employee access in each workplace are created by such options.)

1910.1200(g)(9)

Where employees must travel between workplaces during a workshift, i.e., their work is carried out at more than one geographical location, the material safety data sheets may be kept at the primary workplace facility. In this situation, the employer shall ensure that employees can immediately obtain the required information in an emergency.

1910.1200(g)(10)

Material safety data sheets may be kept in any form, including operating procedures, and may be designed to cover groups of hazardous chemicals in a work area where it may be more appropriate to address the hazards of a process rather than individual hazardous chemicals. However, the employer shall ensure that in all cases the required information is provided for each hazardous chemical, and is readily accessible during each work shift to employees when they are in their work area(s).

1910.1200(g)(11)

Material safety data sheets shall also be made readily available, upon request, to designated representatives and to the Assistant Secretary, in accordance with the requirements of 29 CFR 1910.1020(e). The Director shall also be given access to material safety data sheets in the same manner.

..1910.1200(h)

1910.1200(h)

"Employee information and training."

1910.1200(h)(1)

Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and material safety data sheets.

1910.1200(h)(2)

"Information." Employees shall be informed of:

1910.1200(h)(2)(i)

The requirements of this section;

1910.1200(h)(2)(ii)

Any operations in their work area where hazardous chemicals are present; and,

1910.1200(h)(2)(iii)

The location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and material safety data sheets required by this section.

1910.1200(h)(3)

"Training." Employee training shall include at least:

1910.1200(h)(3)(i)

Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);

1910.1200(h)(3)(ii)

The physical and health hazards of the chemicals in the work area;

..1910.1200(h)(3)(iii)**1910.1200(h)(3)(iii)**

The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and,

1910.1200(h)(3)(iv)

The details of the hazard communication program developed by the employer, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

1910.1200(i)

"Trade secrets."

1910.1200(i)(1)

The chemical manufacturer, importer, or employer may withhold the

specific chemical identity, including the chemical name and other specific identification of a hazardous chemical, from the material safety data sheet, provided that:

1910.1200(i)(1)(i)

The claim that the information withheld is a trade secret can be supported;

1910.1200(i)(1)(ii)

Information contained in the material safety data sheet concerning the properties and effects of the hazardous chemical is disclosed;

1910.1200(i)(1)(iii)

The material safety data sheet indicates that the specific chemical identity is being withheld as a trade secret; and,

1910.1200(i)(1)(iv)

The specific chemical identity is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of this paragraph.

..1910.1200(i)(2)

1910.1200(i)(2)

Where a treating physician or nurse determines that a medical emergency exists and the specific chemical identity of a hazardous chemical is necessary for emergency or first-aid treatment, the chemical manufacturer, importer, or employer shall immediately disclose the specific chemical identity of a trade secret chemical to that treating physician or nurse, regardless of the existence of a written statement of need or a confidentiality agreement. The chemical manufacturer, importer, or employer may require a written statement of need and confidentiality agreement, in accordance with the provisions of paragraphs (i)(3) and (4) of this section, as soon as circumstances permit.

1910.1200(i)(3)

In non-emergency situations, a chemical manufacturer, importer, or employer shall, upon request, disclose a specific chemical identity, otherwise permitted to be withheld under paragraph (i)(1) of this section, to a health professional (i.e. physician, industrial hygienist, toxicologist, epidemiologist, or occupational health nurse) providing medical or other occupational health services to exposed employee(s), and to employees or designated representatives, if:

1910.1200(i)(3)(i)

The request is in writing;

1910.1200(i)(3)(ii)

The request describes with reasonable detail one or more of the following occupational health needs for the information:

1910.1200(i)(3)(ii)(A)

To assess the hazards of the chemicals to which employees will be exposed;

1910.1200(i)(3)(ii)(B)

To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels;

1910.1200(i)(3)(ii)(C)

To conduct pre-assignment or periodic medical surveillance of exposed employees;

1910.1200(i)(3)(ii)(D)

To provide medical treatment to exposed employees;

..1910.1200(i)(3)(ii)(E)**1910.1200(i)(3)(ii)(E)**

To select or assess appropriate personal protective equipment for exposed employees;

1910.1200(i)(3)(ii)(F)

To design or assess engineering controls or other protective measures for exposed employees; and,

1910.1200(i)(3)(ii)(G)

To conduct studies to determine the health effects of exposure.

1910.1200(i)(3)(iii)

The request explains in detail why the disclosure of the specific chemical identity is essential and that, in lieu thereof, the disclosure of the following information to the health professional, employee, or designated representative, would not satisfy the purposes described in paragraph (i)(3)(ii) of this section:

1910.1200(i)(3)(iii)(A)

The properties and effects of the chemical;

1910.1200(i)(3)(iii)(B)

Measures for controlling workers' exposure to the chemical;

1910.1200(i)(3)(iii)(C)

Methods of monitoring and analyzing worker exposure to the chemical;
and,

1910.1200(i)(3)(iii)(D)

Methods of diagnosing and treating harmful exposures to the chemical;

1910.1200(i)(3)(iv)

The request includes a description of the procedures to be used to maintain the confidentiality of the disclosed information; and,

..1910.1200(i)(3)(v)

1910.1200(i)(3)(v)

The health professional, and the employer or contractor of the services of the health professional (i.e. downstream employer, labor organization, or individual employee), employee, or designated representative, agree in a written confidentiality agreement that the health professional, employee, or designated representative, will not use the trade secret information for any purpose other than the health need(s) asserted and agree not to release the information under any circumstances other than to OSHA, as provided in paragraph (i)(6) of this section, except as authorized by the terms of the agreement or by the chemical manufacturer, importer, or employer.

1910.1200(i)(4)

The confidentiality agreement authorized by paragraph (i)(3)(iv) of this section:

1910.1200(i)(4)(i)

May restrict the use of the information to the health purposes indicated in the written statement of need;

1910.1200(i)(4)(ii)

May provide for appropriate legal remedies in the event of a breach of the agreement, including stipulation of a reasonable pre-estimate of likely damages; and,

1910.1200(i)(4)(iii)

May not include requirements for the posting of a penalty bond.

1910.1200(i)(5)

Nothing in this standard is meant to preclude the parties from pursuing

non-contractual remedies to the extent permitted by law.

1910.1200(i)(6)

If the health professional, employee, or designated representative receiving the trade secret information decides that there is a need to disclose it to OSHA, the chemical manufacturer, importer, or employer who provided the information shall be informed by the health professional, employee, or designated representative prior to, or at the same time as, such disclosure.

..1910.1200(i)(7)

1910.1200(i)(7)

If the chemical manufacturer, importer, or employer denies a written request for disclosure of a specific chemical identity, the denial must:

1910.1200(i)(7)(i)

Be provided to the health professional, employee, or designated representative, within thirty days of the request;

1910.1200(i)(7)(ii)

Be in writing;

1910.1200(i)(7)(iii)

Include evidence to support the claim that the specific chemical identity is a trade secret;

1910.1200(i)(7)(iv)

State the specific reasons why the request is being denied; and,

1910.1200(i)(7)(v)

Explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the specific chemical identity.

1910.1200(i)(8)

The health professional, employee, or designated representative whose request for information is denied under paragraph (i)(3) of this section may refer the request and the written denial of the request to OSHA for consideration.

1910.1200(i)(9)

When a health professional, employee, or designated representative refers the denial to OSHA under paragraph (i)(8) of this section, OSHA shall consider the evidence to determine if:

..1910.1200(i)(9)(i)**1910.1200(i)(9)(i)**

The chemical manufacturer, importer, or employer has supported the claim that the specific chemical identity is a trade secret;

1910.1200(i)(9)(ii)

The health professional, employee, or designated representative has supported the claim that there is a medical or occupational health need for the information; and,

1910.1200(i)(9)(iii)

The health professional, employee or designated representative has demonstrated adequate means to protect the confidentiality.

1910.1200(i)(10)**1910.1200(i)(10)(i)**

If OSHA determines that the specific chemical identity requested under paragraph (i)(3) of this section is not a "bona fide" trade secret, or that it is a trade secret, but the requesting health professional, employee, or designated representative has a legitimate medical or occupational health need for the information, has executed a written confidentiality agreement, and has shown adequate means to protect the confidentiality of the information, the chemical manufacturer, importer, or employer will be subject to citation by OSHA.

..1910.1200(i)(10)(ii)**1910.1200(i)(10)(ii)**

If a chemical manufacturer, importer, or employer demonstrates to OSHA that the execution of a confidentiality agreement would not provide sufficient protection against the potential harm from the unauthorized disclosure of a trade secret specific chemical identity, the Assistant Secretary may issue such orders or impose such additional limitations or conditions upon the disclosure of the requested chemical information as may be appropriate to assure that the occupational health services are provided without an undue risk of harm to the chemical manufacturer, importer, or employer.

1910.1200(i)(11)

If a citation for a failure to release specific chemical identity information is contested by the chemical manufacturer, importer, or employer, the matter will be adjudicated before the Occupational Safety and Health Review Commission in accordance with the Act's enforcement scheme and the applicable Commission rules of procedure. In accordance with the Commission rules, when a chemical manufacturer, importer, or employer continues to withhold the information during the contest, the

Administrative Law Judge may review the citation and supporting documentation "in camera" or issue appropriate orders to protect the confidentiality of such matters.

1910.1200(i)(12)

Notwithstanding the existence of a trade secret claim, a chemical manufacturer, importer, or employer shall, upon request, disclose to the Assistant Secretary any information which this section requires the chemical manufacturer, importer, or employer to make available. Where there is a trade secret claim, such claim shall be made no later than at the time the information is provided to the Assistant Secretary so that suitable determinations of trade secret status can be made and the necessary protections can be implemented.

1910.1200(i)(13)

Nothing in this paragraph shall be construed as requiring the disclosure under any circumstances of process or percentage of mixture information which is a trade secret.

..1910.1200(j)

1910.1200(j)

"Effective dates." Chemical manufacturers, importers, distributors, and employers shall be in compliance with all provisions of this section by March 11, 1994.

Note: The effective date of the clarification that the exemption of wood and wood products from the Hazard Communication standard in paragraph (b)(6)(iv) only applies to wood and wood products including lumber which will not be processed, where the manufacturer or importer can establish that the only hazard they pose to employees is the potential for flammability or combustibility, and that the exemption does not apply to wood or wood products which have been treated with a hazardous chemical covered by this standard, and wood which may be subsequently sawed or cut generating dust has been stayed from March 11, 1994 to August 11, 1994.

[59 FR 17479, April 13, 1994; 59 FR 65947, Dec. 22, 1994; 61 FR 5507, Feb. 13, 1996]

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Regulations (Standards - 29 CFR)

Health Hazard Definitions (Mandatory) - 1910.1200 App A

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● Part Number:	1910
● Part Title:	Occupational Safety and Health Standards
● Subpart:	Z
● Subpart Title:	Toxic and Hazardous Substances
● Standard Number:	1910.1200 App A
● Title:	Health Hazard Definitions (Mandatory)

Although safety hazards related to the physical characteristics of a chemical can be objectively defined in terms of testing requirements (e.g. flammability), health hazard definitions are less precise and more subjective. Health hazards may cause measurable changes in the body - such as decreased pulmonary function. These changes are generally indicated by the occurrence of signs and symptoms in the exposed employees - such as shortness of breath, a non-measurable, subjective feeling. Employees exposed to such hazards must be apprised of both the change in body function and the signs and symptoms that may occur to signal that change.

The determination of occupational health hazards is complicated by the fact that many of the effects or signs and symptoms occur commonly in non-occupationally exposed populations, so that effects of exposure are difficult to separate from normally occurring illnesses. Occasionally, a substance causes an effect that is rarely seen in the population at large, such as angiosarcomas caused by vinyl chloride exposure, thus making it easier to ascertain that the occupational exposure was the primary causative factor. More often, however, the effects are common, such as lung cancer. The situation is further complicated by the fact that most chemicals have not been adequately tested to determine their health hazard potential, and data do not exist to substantiate these effects.

There have been many attempts to categorize effects and to define them in various ways. Generally, the terms "acute" and "chronic" are used to delineate between effects on the basis of severity or duration. "Acute" effects usually occur rapidly as a result of short-term exposures, and are of short duration. "Chronic" effects generally occur as a result of long-term exposure, and are of long duration.

The acute effects referred to most frequently are those defined by the American National Standards Institute (ANSI) standard for Precautionary Labeling of Hazardous Industrial Chemicals (Z129.1-1988) - irritation, corrosivity, sensitization and lethal dose. Although these are important health effects, they do not adequately cover the considerable range of acute effects which may occur as a result of occupational exposure, such as, for example, narcosis.

Similarly, the term chronic effect is often used to cover only carcinogenicity, teratogenicity, and mutagenicity. These effects are obviously a concern in the workplace, but again, do not adequately cover the area of chronic effects, excluding, for example, blood dyscrasias (such as anemia), chronic bronchitis and liver atrophy.

The goal of defining precisely, in measurable terms, every possible health effect that may occur in the workplace as a result of chemical exposures cannot realistically be accomplished. This does not negate the need for employees to be informed of such effects and protected from them. Appendix B, which is also mandatory, outlines the principles and procedures of hazard assessment.

For purposes of this section, any chemicals which meet any of the following definitions, as determined by the criteria set forth in Appendix B are health hazards. However, this is not intended to be an exclusive categorization scheme. If there are available scientific data that involve other animal species or test methods, they must also be evaluated to determine the applicability of the HCS.

1. "Carcinogen:" A chemical is considered to be a carcinogen if:

(a) It has been evaluated by the International Agency for Research on Cancer (IARC), and found to be a carcinogen or potential carcinogen; or

(b) It is listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP) (latest edition); or,

(c) It is regulated by OSHA as a carcinogen.

2. "Corrosive:" A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. For example, a chemical is considered to be corrosive if, when tested on the intact skin of albino rabbits by the method described by the U.S. Department of Transportation in appendix A to 49 CFR part 173, it destroys or changes irreversibly the structure of the tissue at the site of contact following an exposure period of four hours. This term shall not refer to action on inanimate surfaces.

3. "Highly toxic:" A chemical falling within any of the following categories:

(a) A chemical that has a median lethal dose (LD(50)) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.

(b) A chemical that has a median lethal dose (LD(50)) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.

(c) A chemical that has a median lethal concentration (LC(50)) in air of 200 parts per million by volume or less of gas or vapor, or 2 milligrams

per liter or less of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

4. "Irritant:" A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A chemical is a skin irritant if, when tested on the intact skin of albino rabbits by the methods of 16 CFR 1500.41 for four hours exposure or by other appropriate techniques, it results in an empirical score of five or more. A chemical is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques.

5. "Sensitizer:" A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

6. "Toxic." A chemical falling within any of the following categories:

(a) A chemical that has a median lethal dose (LD(50)) of more than 50 milligrams per kilogram but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.

(b) A chemical that has a median lethal dose (LD(50)) of more than 200 milligrams per kilogram but not more than 1,000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.

(c) A chemical that has a median lethal concentration (LC(50)) in air of more than 200 parts per million but not more than 2,000 parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than 20 milligrams per liter of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

7. "Target organ effects."

The following is a target organ categorization of effects which may occur, including examples of signs and symptoms and chemicals which have been found to cause such effects. These examples are presented to illustrate the range and diversity of effects and hazards found in the workplace, and the broad scope employers must consider in this area, but are not intended to be all-inclusive.

- a. Hepatotoxins: Chemicals which produce liver damage
Signs & Symptoms: Jaundice; liver enlargement
Chemicals: Carbon tetrachloride; nitrosamines
- b. Nephrotoxins: Chemicals which produce kidney damage
Signs & Symptoms: Edema; proteinuria
Chemicals: Halogenated hydrocarbons; uranium
- c. Neurotoxins: Chemicals which produce their primary toxic effects on the nervous system
Signs & Symptoms: Narcosis; behavioral changes; decrease in motor

functions

Chemicals: Mercury; carbon disulfide

d. Agents which act on the blood or hemato-poietic system: Decrease hemoglobin function; deprive the body tissues of oxygen

Signs & Symptoms: Cyanosis; loss of consciousness

Chemicals: Carbon monoxide; cyanides

e. Agents which damage the lung: Chemicals which irritate or damage pulmonary tissue

Signs & Symptoms: Cough; tightness in chest; shortness of breath

Chemicals: Silica; asbestos

f. Reproductive toxins: Chemicals which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (teratogenesis)

Signs & Symptoms: Birth defects; sterility

Chemicals: Lead; DBCP

g. Cutaneous hazards: Chemicals which affect the dermal layer of the body


Signs & Symptoms: Defatting of the skin; rashes; irritation


Chemicals: Ketones; chlorinated compounds

h. Eye hazards: Chemicals which affect the eye or visual capacity

Signs & Symptoms: Conjunctivitis; corneal damage

Chemicals: Organic solvents; acids

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Regulations (Standards - 29 CFR)

Hazard determination (Mandatory) - 1910.1200 App B

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● Part Number:	1910
● Part Title:	Occupational Safety and Health Standards
● Subpart:	Z
● Subpart Title:	Toxic and Hazardous Substances
● Standard Number:	1910.1200 App B
● Title:	Hazard determination (Mandatory)


The quality of a hazard communication program is largely dependent upon the adequacy and accuracy of the hazard determination. The hazard determination requirement of this standard is performance-oriented. Chemical manufacturers, importers, and employers evaluating chemicals are not required to follow any specific methods for determining hazards, but they must be able to demonstrate that they have adequately ascertained the hazards of the chemicals produced or imported in accordance with the criteria set forth in this Appendix.


Hazard evaluation is a process which relies heavily on the professional judgment of the evaluator, particularly in the area of chronic hazards. The performance-orientation of the hazard determination does not diminish the duty of the chemical manufacturer, importer or employer to conduct a thorough evaluation, examining all relevant data and producing a scientifically defensible evaluation. For purposes of this standard, the following criteria shall be used in making hazard determinations that meet the requirements of this standard.

1. "Carcinogenicity:" As described in paragraph (d)(4) of this section and Appendix A of this section, a determination by the National Toxicology Program, the International Agency for Research on Cancer, or OSHA that a chemical is a carcinogen or potential carcinogen will be considered conclusive evidence for purposes of this section. In addition, however, all available scientific data on carcinogenicity must be evaluated in accordance with the provisions of this Appendix and the requirements of the rule.
2. "Human data:" Where available, epidemiological studies and case reports of adverse health effects shall be considered in the evaluation.
3. "Animal data:" Human evidence of health effects in exposed populations is generally not available for the majority of chemicals produced or used in the workplace. Therefore, the available results of toxicological testing in animal populations shall be used to predict the health effects that may be experienced by exposed workers. In particular, the definitions of certain acute hazards refer to specific animal testing results (see Appendix A).

4. "Adequacy and reporting of data." The results of any studies which are designed and conducted according to established scientific principles, and which report statistically significant conclusions regarding the health effects of a chemical, shall be a sufficient basis for a hazard determination and reported on any material safety data sheet. In vitro studies alone generally do not form the basis for a definitive finding of hazard under the HCS since they have a positive or negative result rather than a statistically significant finding.

The chemical manufacturer, importer, or employer may also report the results of other scientifically valid studies which tend to refute the findings of hazard.

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Regulations (Standards - 29 CFR)**Information sources (Advisory) - 1910.1200 App C**


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- **Part Number:** 1910
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 - **Title:** Information sources (Advisory)
-

Editorial Note: The Federal Register of March 7, 1996, removed 1910.1200 Appendix C.

[61 FR 9227, March 7, 1996]

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Regulations (Standards - 29 CFR)

Definition of "Trade Secret" (Mandatory) - 1910.1200 App D

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● Part Number:	1910
● Part Title:	Occupational Safety and Health Standards
● Subpart:	Z
● Subpart Title:	Toxic and Hazardous Substances
● Standard Number:	1910.1200 App D
● Title:	Definition of "Trade Secret" (Mandatory)


The following is a reprint of the "Restatement of Torts" section 757, comment b (1939):


b. "Definition of trade secret." A trade secret may consist of any formula, pattern, device or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it. It may be a formula for a chemical compound, a process of manufacturing, treating or preserving materials, a pattern for a machine or other device, or a list of customers. It differs from other secret information in a business (see s759 of the Restatement of Torts which is not included in this Appendix) in that it is not simply information as to single or ephemeral events in the conduct of the business, as, for example, the amount or other terms of a secret bid for a contract or the salary of certain employees, or the security investments made or contemplated, or the date fixed for the announcement of a new policy or for bringing out a new model or the like. A trade secret is a process or device for continuous use in the operations of the business. Generally it relates to the production of goods, as, for example, a machine or formula for the production of an article. It may, however, relate to the sale of goods or to other operations in the business, such as a code for determining discounts, rebates or other concessions in a price list or catalogue, or a list of specialized customers, or a method of bookkeeping or other office management.

"Secrecy." The subject matter of a trade secret must be secret. Matters of public knowledge or of general knowledge in an industry cannot be appropriated by one as his secret. Matters which are completely disclosed by the goods which one markets cannot be his secret. Substantially, a trade secret is known only in the particular business in which it is used. It is not requisite that only the proprietor of the business know it. He may, without losing his protection, communicate it to employees involved in its use. He may likewise communicate it to others pledged to secrecy. Others may also know of it independently, as, for example, when they have discovered the process or formula by independent invention and are keeping it secret. Nevertheless, a substantial element of secrecy must exist, so that, except by the use of improper means, there would be difficulty in acquiring the information. An exact definition of a trade secret

is not possible. Some factors to be considered in determining whether given information is one's trade secret are: (1) The extent to which the information is known outside of his business; (2) the extent to which it is known by employees and others involved in his business; (3) the extent of measures taken by him to guard the secrecy of the information; (4) the value of the information to him and his competitors; (5) the amount of effort or money expended by him in developing the information; (6) the ease or difficulty with which the information could be properly acquired or duplicated by others.

"Novelty and prior art." A trade secret may be a device or process which is patentable; but it need not be that. It may be a device or process which is clearly anticipated in the prior art or one which is merely a mechanical improvement that a good mechanic can make. Novelty and invention are not requisite for a trade secret as they are for patentability. These requirements are essential to patentability because a patent protects against unlicensed use of the patented device or process even by one who discovers it properly through independent research. The patent monopoly is a reward to the inventor. But such is not the case with a trade secret. Its protection is not based on a policy of rewarding or otherwise encouraging the development of secret processes or devices. The protection is merely against breach of faith and reprehensible means of learning another's secret. For this limited protection it is not appropriate to require also the kind of novelty and invention which is a requisite of patentability. The nature of the secret is, however, an important factor in determining the kind of relief that is appropriate against one who is subject to liability under the rule stated in this Section. Thus, if the secret consists of a device or process which is a novel invention, one who acquires the secret wrongfully is ordinarily enjoined from further use of it and is required to account for the profits derived from his past use. If, on the other hand, the secret consists of mechanical improvements that a good mechanic can make without resort to the secret, the wrongdoer's liability may be limited to damages, and an injunction against future use of the improvements made with the aid of the secret may be inappropriate.

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Regulations (Standards - 29 CFR)

Guidelines for Employer Compliance (Advisory) - 1910.1200 App E

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● Part Number:	1910
● Part Title:	Occupational Safety and Health Standards
● Subpart:	Z
● Subpart Title:	Toxic and Hazardous Substances
● Standard Number:	1910.1200 App E
● Title:	Guidelines for Employer Compliance (Advisory)

The Hazard Communication Standard (HCS) 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. They also need to know what protective measures are available to prevent adverse effects from occurring. The HCS is designed to provide employees with the information they need.

Knowledge acquired under the HCS will help employers provide safer workplaces for their employees. When employers have information about the chemicals being used, they can take steps to reduce exposures, substitute less hazardous materials, and establish proper work practices. These efforts will help prevent the occurrence of work-related illnesses and injuries caused by chemicals.

The HCS addresses the issues of evaluating and communicating hazards to workers. Evaluation of chemical hazards involves a number of technical concepts, and is a process that requires the professional judgment of experienced experts. That's why the HCS is designed so that employers who simply use chemicals, rather than produce or import them, are not required to evaluate the hazards of those chemicals. Hazard determination is the responsibility of the producers and importers of the materials. Producers and importers of chemicals are then required to provide the hazard information to employers that purchase their products.

Employers that don't produce or import chemicals need only focus on those parts of the rule that deal with establishing a workplace program and communicating information to their workers. This appendix is a general guide for such employers to help them determine what's required under the rule. It does not supplant or substitute for the regulatory provisions, but rather provides a simplified outline of the steps an average employer would follow to meet those requirements.

1. "Becoming Familiar With The Rule."

OSHA has provided a simple summary of the HCS in a pamphlet entitled

"Chemical Hazard Communication," OSHA Publication Number 3084. Some employers prefer to begin to become familiar with the rule's requirements by reading this pamphlet. A copy may be obtained from your local OSHA Area Office, or by contacting the OSHA Publications Office at (202) 523-9667.

The standard is long, and some parts of it are technical, but the basic concepts are simple. In fact, the requirements reflect what many employers have been doing for years. You may find that you are already largely in compliance with many of the provisions, and will simply have to modify your existing programs somewhat. If you are operating in an OSHA-approved State Plan State, you must comply with the State's requirements, which may be different than those of the Federal rule. Many of the State Plan States had hazard communication or "right-to-know" laws prior to promulgation of the Federal rule. Employers in State Plan States should contact their State OSHA offices for more information regarding applicable requirements.

The HCS requires information to be prepared and transmitted regarding all hazardous chemicals. The HCS covers both physical hazards (such as flammability), and health hazards (such as irritation, lung damage, and cancer). Most chemicals used in the workplace have some hazard potential, and thus will be covered by the rule.

One difference between this rule and many others adopted by OSHA is that this one is performance-oriented. That means that you have the flexibility to adapt the rule to the needs of your workplace, rather than having to follow specific, rigid requirements. It also means that you have to exercise more judgment to implement an appropriate and effective program.

The standard's design is simple. Chemical manufacturers and importers must evaluate the hazards of the chemicals they produce or import. Using that information, they must then prepare labels for containers, and more detailed technical bulletins called material safety data sheets (MSDS).

Chemical manufacturers, importers, and distributors of hazardous chemicals are all required to provide the appropriate labels and material safety data sheets to the employers to which they ship the chemicals. The information is to be provided automatically. Every container of hazardous chemicals you receive must be labeled, tagged, or marked with the required information. Your suppliers must also send you a properly completed material safety data sheet (MSDS) at the time of the first shipment of the chemical, and with the next shipment after the MSDS is updated with new and significant information about the hazards.

You can rely on the information received from your suppliers. You have no independent duty to analyze the chemical or evaluate the hazards of it.

Employers that "use" hazardous chemicals must have a program to ensure the information is provided to exposed employees. "Use" means to package, handle, react, or transfer. This is an intentionally broad scope, and includes any situation where a chemical is present in such a way that

employees may be exposed under normal conditions of use or in a foreseeable emergency.

The requirements of the rule that deal specifically with the hazard communication program are found in this section in paragraphs (e), written hazard communication program; (f), labels and other forms of warning; (g), material safety data sheets; and (h), employee information and training. The requirements of these paragraphs should be the focus of your attention. Concentrate on becoming familiar with them, using paragraphs (b), scope and application, and (c), definitions, as references when needed to help explain the provisions.

There are two types of work operations where the coverage of the rule is limited. These are laboratories and operations where chemicals are only handled in sealed containers (e.g., a warehouse). The limited provisions for these workplaces can be found in paragraph (b) of this section, scope and application. Basically, employers having these types of work operations need only keep labels on containers as they are received; maintain material safety data sheets that are received, and give employees access to them; and provide information and training for employees. Employers do not have to have written hazard communication programs and lists of chemicals for these types of operations.

The limited coverage of laboratories and sealed container operations addresses the obligation of an employer to the workers in the operations involved, and does not affect the employer's duties as a distributor of chemicals. For example, a distributor may have warehouse operations where employees would be protected under the limited sealed container provisions. In this situation, requirements for obtaining and maintaining MSDSs are limited to providing access to those received with containers while the substance is in the workplace, and requesting MSDSs when employees request access for those not received with the containers. However, as a distributor of hazardous chemicals, that employer will still have responsibilities for providing MSDSs to downstream customers at the time of the first shipment and when the MSDS is updated. Therefore, although they may not be required for the employees in the work operation, the distributor may, nevertheless, have to have MSDSs to satisfy other requirements of the rule.

2. "Identify Responsible Staff"

Hazard communication is going to be a continuing program in your facility. Compliance with the HCS is not a "one shot deal." In order to have a successful program, it will be necessary to assign responsibility for both the initial and ongoing activities that have to be undertaken to comply with the rule. In some cases, these activities may already be part of current job assignments. For example, site supervisors are frequently responsible for on-the-job training sessions. Early identification of the responsible employees, and involvement of them in the development of your plan of action, will result in a more effective program design. Evaluation of the effectiveness of your program will also be enhanced by involvement of affected employees.

For any safety and health program, success depends on commitment at

every level of the organization. This is particularly true for hazard communication, where success requires a change in behavior. This will only occur if employers understand the program, and are committed to its success, and if employees are motivated by the people presenting the information to them.

3. "Identify Hazardous Chemicals in the Workplace."

The standard requires a list of hazardous chemicals in the workplace as part of the written hazard communication program. The list will eventually serve as an inventory of everything for which an MSDS must be maintained. At this point, however, preparing the list will help you complete the rest of the program since it will give you some idea of the scope of the program required for compliance in your facility.

The best way to prepare a comprehensive list is to survey the workplace. Purchasing records may also help, and certainly employers should establish procedures to ensure that in the future purchasing procedures result in MSDSs being received before a material is used in the workplace.

The broadest possible perspective should be taken when doing the survey. Sometimes people think of "chemicals" as being only liquids in containers. The HCS covers chemicals in all physical forms - liquids, solids, gases, vapors, fumes, and mists - whether they are "contained" or not. The hazardous nature of the chemical and the potential for exposure are the factors which determine whether a chemical is covered. If it's not hazardous, it's not covered. If there is no potential for exposure (e.g., the chemical is inextricably bound and cannot be released), the rule does not cover the chemical.

Look around. Identify chemicals in containers, including pipes, but also think about chemicals generated in the work operations. For example, welding fumes, dusts, and exhaust fumes are all sources of chemical exposures. Read labels provided by suppliers for hazard information. Make a list of all chemicals in the workplace that are potentially hazardous. For your own information and planning, you may also want to note on the list the location(s) of the products within the workplace, and an indication of the hazards as found on the label. This will help you as you prepare the rest of your program.

Paragraph (b) of this section, scope and application, includes exemptions for various chemicals or workplace situations. After compiling the complete list of chemicals, you should review paragraph (b) of this section to determine if any of the items can be eliminated from the list because they are exempted materials. For example, food, drugs, and cosmetics brought into the workplace for employee consumption are exempt. So rubbing alcohol in the first aid kit would not be covered.

Once you have compiled as complete a list as possible of the potentially hazardous chemicals in the workplace, the next step is to determine if you have received material safety data sheets for all of them. Check your files against the inventory you have just compiled. If any are missing, contact your supplier and request one. It is a good idea to document

these requests, either by copy of a letter or a note regarding telephone conversations. If you have MSDSs for chemicals that are not on your list, figure out why. Maybe you don't use the chemical anymore. Or maybe you missed it in your survey. Some suppliers do provide MSDSs for products that are not hazardous. These do not have to be maintained by you.

You should not allow employees to use any chemicals for which you have not received an MSDS. The MSDS provides information you need to ensure proper protective measures are implemented prior to exposure.

4. "Preparing and Implementing a Hazard Communication Program"

All workplaces where employees are exposed to hazardous chemicals must have a written plan which describes how the standard will be implemented in that facility. Preparation of a plan is not just a paper exercise - all of the elements must be implemented in the workplace in order to be in compliance with the rule. See paragraph (e) of this section for the specific requirements regarding written hazard communication programs. The only work operations which do not have to comply with the written plan requirements are laboratories and work operations where employees only handle chemicals in sealed containers. See paragraph (b) of this section, scope and application, for the specific requirements for these two types of workplaces.

The plan does not have to be lengthy or complicated. It is intended to be a blueprint for implementation of your program - an assurance that all aspects of the requirements have been addressed.

Many trade associations and other professional groups have provided sample programs and other assistance materials to affected employers. These have been very helpful to many employers since they tend to be tailored to the particular industry involved. You may wish to investigate whether your industry trade groups have developed such materials.

Although such general guidance may be helpful, you must remember that the written program has to reflect what you are doing in your workplace. Therefore, if you use a generic program it must be adapted to address the facility it covers. For example, the written plan must list the chemicals present at the site, indicate who is to be responsible for the various aspects of the program in your facility, and indicate where written materials will be made available to employees.

If OSHA inspects your workplace for compliance with the HCS, the OSHA compliance officer will ask to see your written plan at the outset of the inspection. In general, the following items will be considered in evaluating your program.

The written program must describe how the requirements for labels and other forms of warning, material safety data sheets, and employee information and training, are going to be met in your facility. The following discussion provides the type of information compliance officers will be looking for to decide whether these elements of the hazard communication program have been properly addressed:

A. "Labels and Other Forms of Warning"

In-plant containers of hazardous chemicals must be labeled, tagged, or marked with the identity of the material and appropriate hazard warnings. Chemical manufacturers, importers, and distributors are required to ensure that every container of hazardous chemicals they ship is appropriately labeled with such information and with the name and address of the producer or other responsible party. Employers purchasing chemicals can rely on the labels provided by their suppliers. If the material is subsequently transferred by the employer from a labeled container to another container, the employer will have to label that container unless it is subject to the portable container exemption. See paragraph (f) of this section for specific labeling requirements.

The primary information to be obtained from an OSHA-required label is an identity for the material, and appropriate hazard warnings. The identity is any term which appears on the label, the MSDS, and the list of chemicals, and thus links these three sources of information. The identity used by the supplier may be a common or trade name ("Black Magic Formula"), or a chemical name (1,1,1-trichloroethane). The hazard warning is a brief statement of the hazardous effects of the chemical ("flammable," "causes lung damage"). Labels frequently contain other information, such as precautionary measures ("do not use near open flame"), but this information is provided voluntarily and is not required by the rule. Labels must be legible, and prominently displayed. There are no specific requirements for size or color, or any specified text.

With these requirements in mind, the compliance officer will be looking for the following types of information to ensure that labeling will be properly implemented in your facility:

1. Designation of person(s) responsible for ensuring labeling of in-plant containers;
2. Designation of person(s) responsible for ensuring labeling of any shipped containers;
3. Description of labeling system(s) used;
4. Description of written alternatives to labeling of in-plant containers (if used); and,
5. Procedures to review and update label information when necessary.

Employers that are purchasing and using hazardous chemicals - rather than producing or distributing them - will primarily be concerned with ensuring that every purchased container is labeled. If materials are transferred into other containers, the employer must ensure that these are labeled as well, unless they fall under the portable container exemption (paragraph (f)(7) of this section). In terms of labeling systems, you can simply choose to use the labels provided by your suppliers on the containers. These will generally be verbal text labels, and do not usually include numerical rating systems or symbols that require special training. The most important thing to remember is that this is a

continuing duty - all in-plant containers of hazardous chemicals must always be labeled. Therefore, it is important to designate someone to be responsible for ensuring that the labels are maintained as required on the containers in your facility, and that newly purchased materials are checked for labels prior to use.

B. "Material Safety Data Sheets"

Chemical manufacturers and importers are required to obtain or develop a material safety data sheet for each hazardous chemical they produce or import. Distributors are responsible for ensuring that their customers are provided a copy of these MSDSs. Employers must have an MSDS for each hazardous chemical which they use. Employers may rely on the information received from their suppliers. The specific requirements for material safety data sheets are in paragraph (g) of this section. There is no specified format for the MSDS under the rule, although there are specific information requirements. OSHA has developed a non-mandatory format, OSHA Form 174, which may be used by chemical manufacturers and importers to comply with the rule. The MSDS must be in English. You are entitled to receive from your supplier a data sheet which includes all of the information required under the rule. If you do not receive one automatically, you should request one. If you receive one that is obviously inadequate, with, for example, blank spaces that are not completed, you should request an appropriately completed one. If your request for a data sheet or for a corrected data sheet does not produce the information needed, you should contact your local OSHA Area Office for assistance in obtaining the MSDS.

The role of MSDSs under the rule is to provide detailed information on each hazardous chemical, including its potential hazardous effects, its physical and chemical characteristics, and recommendations for appropriate protective measures. This information should be useful to you as the employer responsible for designing protective programs, as well as to the workers. If you are not familiar with material safety data sheets and with chemical terminology, you may need to learn to use them yourself. A glossary of MSDS terms may be helpful in this regard. Generally speaking, most employers using hazardous chemicals will primarily be concerned with MSDS information regarding hazardous effects and recommended protective measures. Focus on the sections of the MSDS that are applicable to your situation.

MSDSs must be readily accessible to employees when they are in their work areas during their workshifts. This may be accomplished in many different ways. You must decide what is appropriate for your particular workplace. Some employers keep the MSDSs in a binder in a central location (e.g., in the pick-up truck on a construction site). Others, particularly in workplaces with large numbers of chemicals, computerize the information and provide access through terminals. As long as employees can get the information when they need it, any approach may be used. The employees must have access to the MSDSs themselves - simply having a system where the information can be read to them over the phone is only permitted under the mobile worksite provision, paragraph (g)(9) of this section, when employees must travel between

workplaces during the shift. In this situation, they have access to the MSDSs prior to leaving the primary worksite, and when they return, so the telephone system is simply an emergency arrangement.

In order to ensure that you have a current MSDS for each chemical in the plant as required, and that employee access is provided, the compliance officers will be looking for the following types of information in your written program:

1. Designation of person(s) responsible for obtaining and maintaining the MSDSs;
2. How such sheets are to be maintained in the workplace (e.g., in notebooks in the work area(s) or in a computer with terminal access), and how employees can obtain access to them when they are in their work area during the work shift;
3. Procedures to follow when the MSDS is not received at the time of the first shipment;
4. For producers, procedures to update the MSDS when new and significant health information is found; and,
5. Description of alternatives to actual data sheets in the workplace, if used.

For employers using hazardous chemicals, the most important aspect of the written program in terms of MSDSs is to ensure that someone is responsible for obtaining and maintaining the MSDSs for every hazardous chemical in the workplace. The list of hazardous chemicals required to be maintained as part of the written program will serve as an inventory. As new chemicals are purchased, the list should be updated. Many companies have found it convenient to include on their purchase orders the name and address of the person designated in their company to receive MSDSs.

C. "Employee Information and Training"

Each employee who may be "exposed" to hazardous chemicals when working must be provided information and trained prior to initial assignment to work with a hazardous chemical, and whenever the hazard changes. "Exposure" or "exposed" under the rule means that "an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.) and includes potential (e.g., accidental or possible) exposure." See paragraph (h) of this section for specific requirements. Information and training may be done either by individual chemical, or by categories of hazards (such as flammability or carcinogenicity). If there are only a few chemicals in the workplace, then you may want to discuss each one individually. Where there are large numbers of chemicals, or the chemicals change frequently, you will probably want to train generally based on the hazard categories (e.g., flammable liquids, corrosive materials, carcinogens). Employees will have access to the substance-specific information on the labels and MSDSs.

Information and training is a critical part of the hazard communication program. Information regarding hazards and protective measures are provided to workers through written labels and material safety data sheets. However, through effective information and training, workers will learn to read and understand such information, determine how it can be obtained and used in their own workplaces, and understand the risks of exposure to the chemicals in their workplaces as well as the ways to protect themselves. A properly conducted training program will ensure comprehension and understanding. It is not sufficient to either just read material to the workers, or simply hand them material to read. You want to create a climate where workers feel free to ask questions. This will help you to ensure that the information is understood. You must always remember that the underlying purpose of the HCS is to reduce the incidence of chemical source illnesses and injuries. This will be accomplished by modifying behavior through the provision of hazard information and information about protective measures. If your program works, you and your workers will better understand the chemical hazards within the workplace. The procedures you establish regarding, for example, purchasing, storage, and handling of these chemicals will improve, and thereby reduce the risks posed to employees exposed to the chemical hazards involved. Furthermore, your workers' comprehension will also be increased, and proper work practices will be followed in your workplace.

If you are going to do the training yourself, you will have to understand the material and be prepared to motivate the workers to learn. This is not always an easy task, but the benefits are worth the effort. More information regarding appropriate training can be found in OSHA Publication No. 2254 which contains voluntary training guidelines prepared by OSHA's Training Institute. A copy of this document is available from OSHA's Publications Office at (202) 219-4667. In reviewing your written program with regard to information and training, the following items need to be considered:

1. Designation of person(s) responsible for conducting training;
2. Format of the program to be used (audiovisuals, classroom instruction, etc.);
3. Elements of the training program (should be consistent with the elements in paragraph (h) of this section); and,
4. Procedure to train new employees at the time of their initial assignment to work with a hazardous chemical, and to train employees when a new hazard is introduced into the workplace.

The written program should provide enough details about the employer's plans in this area to assess whether or not a good faith effort is being made to train employees. OSHA does not expect that every worker will be able to recite all of the information about each chemical in the workplace. In general, the most important aspects of training under the HCS are to ensure that employees are aware that they are exposed to hazardous chemicals, that they know how to read and use labels and material safety data sheets, and that, as a consequence of learning this information, they

are following the appropriate protective measures established by the employer. OSHA compliance officers will be talking to employees to determine if they have received training, if they know they are exposed to hazardous chemicals, and if they know where to obtain substance-specific information on labels and MSDSs.

The rule does not require employers to maintain records of employee training, but many employers choose to do so. This may help you monitor your own program to ensure that all employees are appropriately trained. If you already have a training program, you may simply have to supplement it with whatever additional information is required under the HCS. For example, construction employers that are already in compliance with the construction training standard (29 CFR 1926.21) will have little extra training to do.

An employer can provide employees information and training through whatever means are found appropriate and protective. Although there would always have to be some training on-site (such as informing employees of the location and availability of the written program and MSDSs), employee training may be satisfied in part by general training about the requirements of the HCS and about chemical hazards on the job which is provided by, for example, trade associations, unions, colleges, and professional schools. In addition, previous training, education and experience of a worker may relieve the employer of some of the burdens of informing and training that worker. Regardless of the method relied upon, however, the employer is always ultimately responsible for ensuring that employees are adequately trained. If the compliance officer finds that the training is deficient, the employer will be cited for the deficiency regardless of who actually provided the training on behalf of the employer.

D. "Other Requirements"

In addition to these specific items, compliance officers will also be asking the following questions in assessing the adequacy of the program:

Does a list of the hazardous chemicals exist in each work area or at a central location?

Are methods the employer will use to inform employees of the hazards of non-routine tasks outlined?

Are employees informed of the hazards associated with chemicals contained in unlabeled pipes in their work areas?

On multi-employer worksites, has the employer provided other employers with information about labeling systems and precautionary measures where the other employers have employees exposed to the initial employer's chemicals?

Is the written program made available to employees and their designated representatives?

If your program adequately addresses the means of communicating

information to employees in your workplace, and provides answers to the basic questions outlined above, it will be found to be in compliance with the rule.

5. "Checklist for Compliance"

The following checklist will help to ensure you are in compliance with the rule:

Obtained a copy of the rule.	_____
Read and understood the requirements.	_____
Assigned responsibility for tasks.	_____
Prepared an inventory of chemicals.	_____
Ensured containers are labeled.	_____
Obtained MSDS for each chemical.	_____
Prepared written program.	_____
Made MSDSs available to workers.	_____
Conducted training of workers.	_____
Established procedures to maintain current program.	_____
Established procedures to evaluate effectiveness.	_____

6. "Further Assistance"

If you have a question regarding compliance with the HCS, you should contact your local OSHA Area Office for assistance. In addition, each OSHA Regional Office has a Hazard Communication Coordinator who can answer your questions. Free consultation services are also available to assist employers, and information regarding these services can be obtained through the Area and Regional offices as well.

The telephone number for the OSHA office closest to you should be listed in your local telephone directory. If you are not able to obtain this information, you may contact OSHA's Office of Information and Consumer Affairs at (202) 219-8151 for further assistance in identifying the appropriate contacts.

[52 FR 31877, Aug. 24, 1987; 52 FR 46080, Dec. 4, 1987; 53 FR 15035, Apr. 27, 1988; 54 FR 6888, Feb. 15, 1989; 54 FR 24334, June 7, 1989; 59 FR 6170, Feb. 9, 1994; 59 FR 17479, April 13, 1994; 59 FR 65947, Dec. 22, 1994; 61 FR 5507, Feb. 13, 1996; 61 FR 9227, March 7, 1996]

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