



## **Board Policy 6813 Hazard Communication Program**

Reference: *California Code of Regulations, Title 8, Section 5194 (8 CCR 5194);*

Through the establishment of a Hazard Communication Program, the West Hills Community College District ensures that its employees are aware of the hazards associated with chemical substances contained in products that may be used in the workplace. This program supplements the district's Injury and Illness Prevention Program (IIPP) (see Board Policy 7343) and is the mechanism for compliance with the Cal/OSHA Hazard Communication Standard contained in Title 8 of the California Code of Regulations.

Board approval date: 12/16/08



# ***HAZARD COMMUNICATION PROGRAM***

***October, 2008***

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## **1.0 Purpose**

The West Hills Community College District has developed the following Hazard Communication Program to ensure that its employees are aware of the hazards associated with chemical substances contained in products that may be used in the workplace. This program supplements the District's Injury and Illness Prevention Program (IIPP) and is the mechanism for compliance with the Cal/OSHA Hazard Communication Standard contained in Title 8 of the California Code of Regulations, Section 5194 (8 CCR 5194).

This program shall be reviewed and updated on an annual basis or as State and Federal regulations change.

## **2.0 Scope and Application**

The Hazard Communication Standard (HazCom) applies to all employees that may be exposed to hazardous chemicals, as defined by regulation, in the work place under the normal conditions of their employment. The Hazard Communication Plan required by the standard has been developed and adopted District-wide under the authority of the Vice Chancellor Business Services (Vice Chancellor).

### **2.1 Responsibilities**

The President and/or Director of each campus or center within the District shall have the primary responsibility for the HazCom Plan at their respective campus or center. This responsibility includes the implementation and assurances that each campus or center facility is in compliance and that all required personnel fully participate. The Vice Chancellor shall have the primary responsibility for the HazCom Plan conformance at the District. This responsibility includes the implementation and assurances that each district facility, college, center and maintenance/operation facility and activity is in compliance and that all required personnel fully participate. The overall safety program and responsibilities of key personnel are presented in the District's Injury Illness Prevention Program (IIPP).

### **2.2 Program Administrator**

The District-wide HazCom Program Administrator is the Vice Chancellor or his/her designee. The Vice Chancellor or his/her designee shall update this program as appropriate and will be responsible for the distribution of the updated program to Administrators and Managers on each campus. The Vice Chancellor will also be responsible for verifying that the Material Safety Data Sheets (MSDS's) are maintained at each of the District's campuses, centers and facilities and to ensure that those employees have received appropriate hazard communication training. The District's Chemical Hygiene Officer (CHO) will be responsible for verifying that the MSDS's are maintained at each of the District's Co-laboratories.

### **2.3 Department Managers and Supervisors**

Each department manager/supervisor, both certificated and classified, shall be responsible for ensuring that all chemical agents are inventoried, that the

inventory is current, and that MSDSs for chemical products used or stored in their work areas are maintained and are readily available for review by employees. The department manager will also be responsible for ensuring that all containers are labeled appropriately and that employees receive suitable training in this program and in the safe use of all agents brought into the workplace.

#### 2.4 Purchasing Agent(s)

Personnel purchasing chemicals must verify that an MSDS is requested from the supplier and received with each new chemical purchase. New MSDS's will be forwarded to the appropriate department manager(s) for inclusion with existing MSDS's, and the chemical inventory will be updated.

#### 2.5 Employees

Each employee using chemicals should verify that an MSDS is on file for each chemical used and that the chemical is listed in the chemical inventory. The user must abide by the procedures for the safe use of the chemical. Personal protective equipment, if necessary, must be available and used, and the required first-aid treatment facilities must be available as specified in the MSDS.

### **3.0 Material Safety Data Sheets (MSDS)**

#### 3.1 General

An MSDS is a document that chemical manufacturers, distributors, and importers are required to prepare and provide to chemical product users. Employers (managers and supervisors) and employees must use the MSDS to determine the risk of injury, the required safeguards, exposure limits, and first-aid or medical treatment required for each and every chemical brought into the workplace.

MSDS's contain the following information:

- General product information, including product name, manufacturer's name, and the phone number to call for additional information
- Hazardous ingredients, including common chemical or trade names and exposure limits (PELs, TLVs, or other recommended safe exposure limits)
- Physical and chemical characteristics, including things like appearance and odor, boiling point, vapor pressure, etc.
- Fire and explosion hazard, including flashpoint, flammability limit, and fire fighting procedures
- Reactivity data, including stability, incompatibility, and information for situations to avoid
- Health hazard data, including routes of exposure, signs and symptoms of exposure, and emergency and first-aid procedures

- Precautions for safe handling and use, including clean-up methods, disposal methods, and handling precautions
- Control measures, including the types of personal protective equipment recommended when handling the chemical product, as well as special work and hygiene practices

### 3.2 Location

An MSDS is to be obtained for each chemical product used in the workplace. MSDS's will be consolidated and kept at the supervisor's office, the Dean's / Division office, store room, etc. and in any another designated locations in the areas where the chemicals are used. Also, an inventory list of chemicals used at each work location shall be maintained with the MSDS's.

### 3.3 Chemical Inventory

A chemical inventory shall be maintained for all chemicals used in the workplace, laboratories. The chemical inventory will be kept with the MSDS's and shall be updated when new chemicals are introduced into the workplace. Prior to the introduction of new chemicals into the workplace, the responsible supervisor should consult with the District's Chemical Hygiene Officer or the Vice Chancellor.

### 3.4 Campus / Centers Laboratories

An up-to-date inventory for all chemicals covered by 8 CCR 5194 will be kept with the MSDS binder in the immediate area where the chemicals are used or stored. If multiple locations are used for the use of storage of covered chemicals, the supervisor will maintain a master inventory list of all chemicals under his / her control. The master list and MSDS binders will be maintained by the supervisor in the supervisors office, store room, etc.

A chemical inventory will be compiled for all laboratories District-wide and will be kept in the office of the District CHO. Each campus and center laboratory will maintain an up-to-date inventory of all chemicals used in the specific laboratory along with the corresponding MSDS's. A copy of the inventory shall be available and stored along with the MSDS's. A listing of the chemicals used in the area including the location of the associated MSDS's shall be posted in a prominent area. All campuses and centers have adopted Chemical Hygiene Plans (CHP) in conformance with the California Code of Regulations, Section 5191 (8 CCR 5191). HazCom training requirements of 8 CCR 5194 are separate and distinct from the requirements for training on the Chemical Hygiene Plan and MSDS's required by 8 CCR 5191.

## 4.0 Labeling

All chemical products used by campuses, centers or district operations shall be labeled in English, listing the contents of hazardous substances and providing appropriate hazard warnings.

Manufacturers' labels shall not be removed or defaced. If a manufacturer's label is missing or inadequate, employees are required to contact their supervisor or the Program Administrator for a replacement label.

Repackaging of chemicals shall be done in conformance with the labeling requirements of 8 CCR 5194. Repackaging includes transferring chemicals from bulk containers to "daily use containers." All repacked containers will be labeled with the product name, hazard class and other identifying information. Questions regarding proper labeling of daily use containers should be directed to the District's CHO.

## **5.0 Employee Training**

All newly hired employees, as part of their orientation will receive training in Hazard Communication Awareness. Employees will continue to receive hazard communication training via formal and informal training sessions. The training element of the Hazard Communication Standard (HazCom) applies only to employees that may be exposed to hazardous chemicals on the job under normal conditions of their workplace. The training component of the HazCom standard does not apply to those employees that do not work with or around recognized hazardous materials.

All employees that work with or around hazardous chemicals will receive specialized training to identify the nature of the hazards, methods for the proper management and control of the hazard and personal protection measures necessary before being assigned to work with the chemicals. Specifically, employees covered by the Hazard Communication Training Program will receive an explanation of the following:

- State hazard communication regulations;
- Rights and responsibilities of employers and employees;
- Hazards associated with classes of chemical substances, such as flammables, solvents, metals, acids and caustics, reactives, and toxics;
- How to read an MSDS;
- Safe work practices and personal protective equipment required for handling hazardous chemical products; and
- Location and availability of this written Hazard Communication Program

Records of training will be submitted to and maintained by the Human Resources Department and a copy of the training will be maintained by the department manager or supervisor.

## **6.0 Non-Routine Operations**

Before beginning new or non-routine work operations, special job specific safety meetings shall be held for all affected personnel. At this meeting, the department manager, supervisor, or designated representative shall explain the hazards associated with the non-routine operation, safe work practices, and the required personal protective equipment.

Records of such safety meetings will be maintained by the department manager or supervisor.

## **7.0 Contractor/Subcontractor Employees**

Contractors or subcontractors whose employees may be exposed to hazardous materials while working on District property shall be notified of the presence of such products and the location of the MSDS's. District contractors or subcontractors will also be informed of the manufacturers' suggested protective measures, the District's Hazard Communication Program and the location of MSDS's.

## Material Safety Data Sheet (MSDS)

### Introduction

The Material Safety Data Sheet (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 entry, precautions for safe handling and use, emergency and first-aid procedures, and control measures. Information on an MSDS aids in the selection of safe products and helps prepare employers and employees to respond effectively to daily exposure situations as well as to emergency situations.

The MSDS provides a comprehensive source of information for all types of District employees. There may be information on the MSDS that is not useful to you or not important to the safety and health in your particular operation. Concentrate on the information that is applicable to your situation. Generally, hazard information and protective measures should be the focus of concern.

Appendix C contains a glossary of terms used on MSDS's. Some supervisors and employees who are not very familiar with chemical terminology may find this helpful in reading and understanding MSDS's.

### Cal/OSHA Requirements

Employers must maintain a complete and accurate MSDS for each hazardous chemical that is used in the facility. They are entitled to obtain this information automatically upon purchase of the material. When new and significant information becomes available concerning a product's hazards or ways to protect against the hazards, chemical manufacturers, importers, or distributors must add it to their MSDS within three months and provide it to their customers with the next shipment of the chemical. Employers must have an MSDS for each hazardous chemical used in the workplace.

If there are multiple suppliers of the same chemical, there is no need to retain multiple MSDS's for that chemical.

While MSDS's are not required to be physically attached to a shipment, they must accompany or precede the shipment. When the manufacturer / supplier fails to send an MSDS with a shipment labeled as a hazardous chemical, the employer must obtain one from the chemical manufacturer, importer, or distributor as soon as possible. Similarly, if the MSDS is incomplete or unclear, the employer should contact the manufacturer or importer to get clarification or obtain missing information.

When an employee is unable to obtain an MSDS from the binder or from a supplier or manufacturer, he / she should submit a request to the DEHS, with complete background information. The DEHS may then, call or send a certified letter to the supplier or manufacturer to obtain the needed information.

**Guide for Reviewing MSDS Completeness**  
**OSHA Instruction CPL 2-2.38A, Office of Health Compliance Assistance**  
**29 CFR 1910.1200(g) Material Safety Data Sheets (MSDS)**

- Do chemical manufacturers and importers have MSDS's for each hazardous chemical produced or imported?
- Is each MSDS in English?
- Does each MSDS contain at least the following information:
  - Does MSDS contain the identity used on the label?
  - Does each MSDS contain the chemical and common name(s) for single-substance hazardous chemicals?
    1. For mixtures tested as a whole:
      - Does each MSDS contain the chemical and common name(s) of the ingredients which contribute to these known hazards?
      - Does each MSDS contain the common name(s) of the mixture itself?
    2. For mixtures not tested as a whole:
      - Does each MSDS contain the chemical and common name(s) of all ingredients which are health hazards (1% or greater), or in the case of carcinogens (0.1% or greater)?
      - Does each MSDS contain the chemical and common name(s) of all ingredients which have been determined to present a physical hazard when present in the mixture?
    3. Does each MSDS contain the physical and chemical characteristics of the hazardous chemical (vapor pressure, flash point, etc.)?
    4. Does each MSDS contain the physical hazards of the hazardous chemical, including the potential for fire, explosion, and reactivity?
    5. Does each MSDS contain the health hazards of the hazardous chemical (including signs and symptoms, medical conditions aggravated)?
    6. Does each MSDS contain the primary routes of entry?
    7. Does each MSDS contain the OSHA PEL? The ACGIH TLV? Other exposure limit (including ceiling and other short-term limits)?
    8. Does each MSDS contain information on carcinogen listings (reference OSHA regulated carcinogens, those indicated in the National Toxicology Program (NTP) annual report and those listed by the International Agency for Research on Carcinogens (IARC)?

Note: Negative conclusions regarding carcinogenicity or the fact that there is no information do not have to be reported unless there is a specific blank for carcinogenicity on the form.

9. Does each MSDS contain general applicable procedures and precautions for safe handling and use of the chemical (hygienic practices, maintenance and spill procedures)?
10. Does each MSDS contain generally applicable control (engineering controls, work practices, or personal protective equipment)?
11. Does each MSDS contain emergency and first aid procedures?
12. Does each MSDS contain date of preparation or last change?

13. Does each MSDS contain name, address and telephone number of responsible party?
14. Are all sections of the MSDS completed?

Note: This is for use as an aid on inspections. It is NOT a form.

### **Material Safety Data Sheet Checklist**

You must ensure that each MSDS contains the following information:

- Product or chemical identity used on the label.
- Manufacturer's name and address.
- Chemical and common names of each hazardous ingredient.
- Name, address, and phone number for hazard and emergency information.
- Preparation or revision date.
- The hazardous chemical's physical and chemical characteristics, such as vapor pressure and flash point.
- Physical hazards, including the potential for fire, explosion, and reactivity.
- Known health hazards.
- OSHA permissible exposure limit (PEL), ACGIH threshold limit value (TLV) or other exposure limits.
- Emergency and first-aid procedures.
- Whether OSHA, NTP or IARC lists the ingredient as a carcinogen.
- Precautions for safe handling and use.
- Control measures such as engineering controls, work practices, hygienic practices or personal protective equipment required.
- Primary routes of entry.
- Procedures for spills, leaks, and clean-up.

### **Sections of an MSDS and Their Significance**

OSHA specifies the information to be included on an MSDS, but does not prescribe the precise format for an MSDS. A non-mandatory MSDS form (see OSHA Form 174 on page 6 of this manual) that meets the Hazard Communication Standard requirements has been issued and can be used as is or expanded as needed. There is no mandated form for MSDS's, nor do the sections have to conform to the sections listed below. However, all MSDS's must be in English and must include at least the following information generally divided into eight to ten sections:

#### Section I. Chemical Identity

- The chemical and common name(s) must be provided for single chemical substances.
- An identity on the MSDS must be cross-referenced to the identity found on the label.

## Section II. Hazardous Ingredients

- For a hazardous chemical mixture that has been tested as a whole to determine its hazards, the chemical and common names of the ingredients that are associated with the hazards, and the common name of the mixture must be listed.
- If the chemical is a mixture that has not been tested as a whole, the chemical and common names of all ingredients determined to be health hazards and comprising 1 percent or greater of the composition must be listed.
- Chemical and common names of carcinogens must be listed if they are present in the mixture at levels of 0.1 percent or greater.
- All components of a mixture that have been determined to present a physical hazard must be listed.
- Chemical and common names of all ingredients determined to be health hazards and comprising less than 1 percent (0.1 percent for carcinogens) of the mixture must also be listed if they can still exceed an established Permissible Exposure Limit (PEL) or Threshold Limit Value (TLV) or present a health risk to exposed employees in these concentrations.

## Section III. Physical and Chemical Characteristics

- The physical and chemical characteristics of the hazardous substance must be listed. These include items such as boiling and freezing points, density, vapor pressure, specific gravity, solubility, volatility, and the product's general appearance and odor. These characteristics provide important information for designing safe and healthful work practices.

## Section IV. Fire and Explosion Hazard Data

- The compound's potential for fire and explosion must be described. Also, the fire hazards of the chemical and the conditions under which it could ignite or explode must be identified. Recommended extinguishing agents and fire fighting methods must be described.

## Section V. Reactivity Data

- This section presents information about other chemicals and substances with which it reacts. Information on any hazardous decomposition products, such as carbon monoxide, must be included.

## Section VI. Health Hazards

- The acute and chronic health hazards of the chemical, together with signs and symptoms of exposure, must be listed. In addition, any medical conditions that are aggravated by exposure to the compound must be included. The specific types of chemical health hazards defined in the standard include carcinogens, corrosives, toxins, irritants, sensitizers, mutagens, teratogens, and effects on target organs (i.e., liver, kidney, nervous system, blood, lungs, mucous membranes, reproductive system, skin, eyes, etc.).

- The route of entry section describes the primary pathway by which the chemical enters the body. There are three principal routes of entry: inhalation, skin, and ingestion.
- This section of the MSDS supplies the OSHA PEL, the ACGIH TLV, and other exposure levels used or recommended by the chemical manufacturer.
- If the compound is listed as a carcinogen (cancer-causing agent) by OSHA, the National Toxicology Program (NTP), or the International Agency for Research on Cancer (IARC), this information must be indicated on the MSDS.

#### Section VII. Precautions for Safe Handling and Use

- The standard requires the preparer to describe the precautions for safe handling and use. These include recommended industrial hygiene practices, precautions to be taken during repair and maintenance of equipment, and procedures for cleaning up spills and leaks. Some manufacturers also use this section to include useful information not specifically required by the standard, such as EPA waste disposal methods and state and local requirements.

#### Section VIII. Control Measures

- The standard requires the preparer of the MSDS to list any generally applicable control measures. These include engineering controls, safe handling procedures, and personal protective equipment. Information is often included on the use of goggles, gloves, body suits, respirators, and face shields.

### **Employer Responsibilities**

Employers must ensure that each employee has a basic knowledge of how to find information on an MSDS and how to properly make use of that information. Employers also must ensure the following:

- Complete and accurate MSDS's are made available during each work shift to employees when they are in their work areas.
- Information is provided for each hazardous chemical.

## Sample Exposure Report Form

### Employee Exposure Report

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ Middle Initial: \_\_\_\_\_

Department: \_\_\_\_\_ Title: \_\_\_\_\_ SSN: \_\_\_\_\_

Date/time of exposure: \_\_\_\_\_

Duration of exposure: \_\_\_\_\_

Location of exposure (Bldg. & Rm #): \_\_\_\_\_

Chemical/hazardous substance name(s): \_\_\_\_\_

Chemical Abstract Number(s) – CAS: \_\_\_\_\_

Trade and/or common name(s) of chemical(s) or hazardous substance(s): \_\_\_\_\_

Type of exposure (e.g., inhalation, ingestion, contact) (If contact, what body part was involved?) \_\_\_\_\_

How did exposure occur? (Use additional sheet if necessary): \_\_\_\_\_

Was personal protective equipment available? \_\_\_\_\_ Yes \_\_\_\_\_ No

Was personal protective equipment used? \_\_\_\_\_ Yes \_\_\_\_\_ No

If personal protective equipment was used, what type(s)? \_\_\_\_\_

Did employee receive training/instructions prior to exposure? Explain \_\_\_\_\_

Were any symptoms present at time of exposure? \_\_\_\_\_ Yes \_\_\_\_\_ No

If so, describe (attach physician's report, if applicable): \_\_\_\_\_

Severity of exposure: \_\_\_\_\_ First Aid \_\_\_\_\_ Medical Treatment \_\_\_\_\_ Unknown

Describe: \_\_\_\_\_

\_\_\_\_\_

Did employee lose time from work? \_\_\_\_\_ Yes \_\_\_\_\_ No

Estimate of lost time: \_\_\_\_\_

Were other employees exposed? \_\_\_\_\_ Yes \_\_\_\_\_ No

\_\_\_\_\_

If so, list names & SSN (use additional sheet if necessary): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

List suggestions to prevent recurrence: \_\_\_\_\_

\_\_\_\_\_

**Definitions Commonly Found  
In The Cal-OSHA Hazard Communication Standard  
Or That Relate to the Contents of the Standard**

Article means a manufactured item:

1. Which is formed to be a specific shape or design during manufacture?
2. Which has end use function(s) dependent in whole or in part upon its shape or design during end use.
3. Which does not release, or otherwise result in exposure to a hazardous chemical under normal conditions of use?

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 100oF (37.8oC), but below 200oF (93.3o C), except any mixture having components with flashpoints of 200oF (93.3oC), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

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:

1. A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70°F (21.1°C); or
2. A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130°F (54.4°C) regardless of the pressure at 70°F (21.1°C); or
3. A liquid having a vapor pressure exceeding 4° psi at 100°F (37.8°C) as determined by ASTM D-323-72.

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 of Industrial Relations, California Department of Industrial Relations

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 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.

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

1. 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.
2. Gas, flammable means:
  - 2.1 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.
  - 2.2 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.
  - 2.3 Liquid, flammable means any liquid having a flashpoint below 100°F (37.8°C), except any mixture having components with flashpoints of 100°F (37.8°C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.

2.4 Solid, flammable means a solid, other than a blasting agent or explosive as defined in § 190.109(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.

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 hazard(s) of the chemical(s) in the container(s).

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.

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 8 CCR 5194(g).

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 8 CCR 5237(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, or repackage.

Pyrophoric means a chemical that will ignite spontaneously in air at a temperature of 13°F (54.4°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.

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, or transfer.

Water-reactive means a chemical that reacts with water to release a gas that is either flammable or presents a health hazard. Often when the water is heated it goes into a gaseous state allowing oxygen to be released which can help feed a fire.

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

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

## **Hazard Communication Training Outline**

Training for covered employees shall be conducted:

- At Initial Assignment
  - Whenever New Hazards Are Introduced
  - Annual Review Is Required
- 

### **Information to be Included in Training Sessions**

Employees must be informed of:

- Requirements of Regulations
- Any Operations in Their Areas Where Hazardous Chemicals Are Used
- Location and Availability of MSDS and Plan

Training must cover:

- Method to Detect Presence of Release
  - Physical and Health Hazards
  - Measures for Personal Protection
  - Details of Company Plan
- 

### **Proposed Training Program Format**

- Four Stages of Program
  - Material Safety Data Sheets
  - Marking and Labeling System
  - Employee Training
  - Written Plan
  - Describe Programs and Procedures
  - Hazard Detection
  - Spill Response
  - Use of Protective Equipment
- 

### **Length of the Training Sessions**

It may take a minimum of 30 to 45 minutes to conduct the basic hazard communication training. If there are any specific hazardous substances or situations to be trained on, the session will take longer to complete, depending on the type and number of hazardous substances.

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### **Example of Training:**

Office employees with no specific hazardous substances  
30 - 45 minutes per session.

Paint shop employees with 4 specific substances to be trained on (paints, solvents, etc.)  
1 to 1½ hours, depending on their training needs.

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### **Choosing Substances for Training Purposes**

Train on any substance having a Hazardous Materials Information System (HMIS) rating of:

- HEALTH: 3 or above
- FLAMMABILITY: 3 or above
- REACTIVITY: 2 or above

If none of the above, choose 4 or 5 of the worst substances that you do have and use them in the training.

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### **Comments & Suggestions**

- Training is not handing out MSDSs and asking employees to read.
  - Training should be accompanied by a simple test with signature and filed for documentation.
  - Training probably occurs in two phases.
    - General chemical safety, spill response, labeling procedure, etc; perhaps film or tape.
    - Specific workplace; specific labels, MSDS's, emergency plans, etc.
  - Trainers should be trained and provided with guidelines.
  - If training is decentralized, periodic audits will verify that it is completed.
  - Annual retraining is warranted.
  - Refresher training is required when a new hazard is introduced.
  - Training packages are available:
    - Computer self-paced instruction
    - Films
    - Video tapes
  - There is no substitute for workplace specific training.
-

## Hazard Communication – Test

[Please Print]

Name: \_\_\_\_\_ Department: \_\_\_\_\_

1. MSDS means? \_\_\_\_\_

\_\_\_\_\_

2. What information does the NFPA Diamonds provide? \_\_\_\_\_

\_\_\_\_\_

3. Where can you expect to see it? \_\_\_\_\_

\_\_\_\_\_

4. This training session is your required hazard communication training.

True or False (circle one)

5. Where are the MSDSs kept for your department? \_\_\_\_\_

\_\_\_\_\_

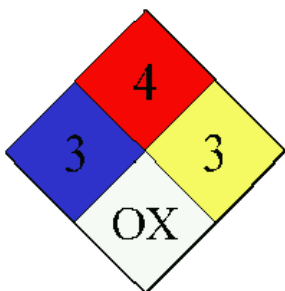
\_\_\_\_\_

6. If you have a question about the safe use of a chemical, you can always consult:

\_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Explanation of Chemical Labeling Systems:  
Hazardous Materials Information System (HMIS) Labels  
National Fire Protection Agency (NFPA) Diamonds  
Uniform Laboratory Hazard Signage (UHLS)**



**NFPA Diamond**

The National Fire Protection Association (NFPA) has developed a system for indicating the health, flammability and reactivity hazards of materials. Each diamond color represents a different type of hazard. The numerical rating inside the diamond indicates the level of hazard involved. This number indicates the severity of the hazard, with a 0 indicating no hazard and 4 indicating the most severe hazard. A special precaution symbol may be used where necessary.

**Rating Summary**

**Health (Blue)**

4	Danger	May be fatal on short exposure. Specialized protective equipment required
3	Warning	Corrosive or toxic. Avoid skin contact or inhalation
2	Warning	May be harmful if inhaled or absorbed
1	Caution	May be irritating
0		No unusual hazard

**Flammability (Red)**





4	Danger	Flammable gas or extremely flammable liquid
3	Warning	Flammable liquid flash point below 100° F
2	Caution	Combustible liquid flash point of 100° to 200° F
1		Combustible if heated
0		Not combustible

**Reactivity (Yellow)**

4	Danger	Explosive material at room temperature
3	Danger	May be explosive if shocked, heated under confinement or mixed with water
2	Warning	Unstable or may react violently if mixed with water
1	Caution	May react if heated or mixed with water but not violently
0	Stable	Not reactive when mixed with water

**Special Notice Key (White)**

(Note the white section does not contain a numeric rating)

	Water Reactive
	Oxidizing Agent
	Corrosive
	Radioactive

## HMIS Labels

The Hazardous Materials Information System (HMIS) labeling system operates on the same principle as the NFPA diamond. Blue indicates health hazard, red indicates flammability, yellow indicates reactivity, and special information (such as what personal protective equipment to wear) will be provided in the white section. It also uses a numerical system from 0 - 4 to indicate the severity of the hazard.

### Key to HMIS Label Numerical Ratings (similar to NFPA)

#### Health

- 4     Deadly: even the slightest exposure to this substance would be life threatening. Only specialized protective clothing, for these materials, should be worn.
- 3     Extreme Danger: serious injury would result from exposure to this substance. Do not expose any body surface to these materials. Full protective measures should be taken.
- 2     Dangerous: exposure to this substance would be hazardous to health. Protective measures are indicated.
- 1     Slight Hazard: irritation or minor injury would result from exposure to this substance. Protective measures are indicated.
- 0     No Hazard: exposure to this substance offers no significant risk to health.

#### Flammability

- 4     Flash Point Below 73°F and Boiling Point Below 100°F: this substance is very flammable, volatile or explosive depending on its state. Extreme caution should be used in handling or storing of these materials.
- 3     Flash Point Below 100°F: flammable, volatile or explosive under almost all normal temperature conditions. Exercise great caution in storage or handling of these materials.
- 2     Flash Point Below 200°F: moderately heated conditions may ignite this substance. Cautionary procedures should be employed in handling.
- 1     Flash Point Above 200°F: this substance must be preheated to ignite. Most combustible solids would be in this category.
- 0     Will Not Burn: substances that will not burn.

#### Reactivity

- 4     May Detonate: substances that are readily capable of detonation or explosion at normal temperatures and pressures. Evacuate area if exposed to heat or fire.

- 3 Explosive: substances that are readily capable of detonation or explosion by a strong initiating source, such as heat, shock or water. Monitor from behind explosion-resistant barriers.
- 2 Unstable: violent chemical changes are possible at normal or elevated temperatures and pressures. Potentially violent or explosive reaction may occur when mixed with water. Monitor from a safe distance.
- 1 Normally stable: substances that may become unstable at elevated temperatures and pressures or when mixed with water. Approach with caution.
- 0 Stable: substances which will remain stable when exposed to heat, pressure or water.

### Uniform Laboratory Hazard Signage (ULHS)

Laboratories should be marked with the appropriate pictographic symbols to warn employees, visitors, and emergency responders what precautions should be observed when entering the laboratory, as well as what hazards to expect inside.

The ULHS system identifies the areas where hazardous substances are used or stored through pictograph symbols.

