



Hazard Communication Program

I. Policy

It is the policy of California State University, Fullerton, insofar as is reasonable and practical, to ensure that employees know the properties and potential safety and health hazards of the materials which they use or to which they are exposed. Employees who use, or may be exposed to, potentially hazardous substances or harmful physical agents shall be informed about the hazards of those substances or physical agents, and shall be trained in the precautions to take to prevent exposure and what to do if they are accidentally exposed. No employee shall engage in or be required to perform any task which is determined to be unsafe or reasonably hazardous.

Hazardous substances in the workplace, in some forms and concentrations, pose potential acute and chronic health hazards to employees who are exposed to these substances. Departments and employees have a right and a need to know the properties and potential hazards of substances to which they may be exposed. Such knowledge is essential in reducing the incidence and cost of occupational disease. Appendices A and B provide further explanation of the scope of health hazards covered by this program and the criteria to be used to determine if a chemical is to be considered hazardous. The purpose of this program is to improve the detection, treatment, and prevention of occupational illness and disease, and to support workers' right to know. It is further intended to ensure that departments and workers have the information necessary for them to know when they are working with or may be exposed to hazardous substances. This program is also intended to ensure that departments provide their employees with training in how to avoid exposure to hazardous substances and what to do if they are accidentally exposed to such substances.

II. Authority

California Code of Regulations, Title 8, Sections 337, 340.2, 3368, 5191, and 5194; Code of Federal Regulations, Title 29, Section 1910.1200.

III. Scope

- A. This program shall apply to all departments that use, handle, or store hazardous substances, as defined in the Program Definitions (Appendix C).
- B. This program applies to any hazardous substance, 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 resulting from workplace operations.

- C. This program does not apply to:
1. Any hazardous waste regulated by the Solid Waste Disposal Act, amended by the Resource Conservation and Recovery Act of 1976;
 2. Tobacco or tobacco products;
 3. Wood or wood products;
 4. Articles (manufactured products);
 5. Food, drugs, or cosmetics intended for personal consumption by employees while in the workplace; and
 6. Any product sold at retail which is incidentally sold to the University or employee, in the same form, approximate amount, concentration, and manner as it is sold to consumers.

IV. Definitions

Terminology used in this manual is defined in Appendix C, Hazard Communication Program Definitions.

V. Responsibilities

- A. Environmental Health and Safety (EHS)
1. Develop, implement, and monitor the Hazard Communication Program.
 2. Assist departments in complying with program requirements including labeling, Safety Data Sheets (SDS), employee information and training, and record keeping.
 3. Maintain inventory of hazardous materials and provide electronic access to SDS's.
 4. Maintain master file of SDS's for hazardous materials reported to the California Electronic Reporting System.
 5. Notify outside contractors of the hazards in which they may be exposed.
 6. Ensure all outside contractors have notified the EHS Office of hazardous materials they will be using on campus.

7. Chemical Hygiene Officer:
 - a. Coordinate and facilitate SDS availability for all hazardous materials.
 - b. Coordinate the collection and disposal of the university's hazardous waste.
 - c. Coordinate the inventory of hazardous substance. Provides updated inventory annually.
- B. Departments
 1. Ensure that all requirements of the Hazard Communication Program have been met before employees are exposed to hazardous substances under normal conditions of use or in a foreseeable emergency.
 2. Develop and maintain an inventory of hazardous substances present in all work areas within the department.
 3. Ensure SDS's are available through MSDSOnline system for current hazardous substances used or purchased.
 4. Maintain a file of SDS's or easy access to electronic SDS's (MSDSOnline).
- C. Purchasing and Support Services
 1. Request, on the Purchase Order Form, an SDS for all suspected hazardous substances as requested by the departments on the Purchase Requisition.
 2. Forward all SDS's to the EHS Office, noting requesting department's name on the sheet.
- D. Employee
 - a) Because of the number of potential hazards that may exist or be created in the work environment, employees must first use common sense and good judgment at all times. Each employee assigned to work with a hazardous substance shall read and comply with all hazard communication procedures, whether written or oral, while performing assigned duties. Although no single set of safety procedures can guarantee accident-free employment or place of employment, the minimum safety standards are listed in the Hazard Communication Program.
 - b) Food and beverages shall not be stored or consumed in areas where they may be contaminated by any toxic material.

VI. Program

A. Labeling

1. Each department shall ensure that each container of hazardous substances in the workplace is labeled, tagged, or marked in alignment with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS):
 - a. Signal word
 - b. Pictogram
 - c. Hazard Statement
 - d. Precautionary statement for each hazard class and category
2. Employees shall not remove or deface existing labels on incoming containers of hazardous substances.
3. The labeling requirements of this program do not apply to the following substances:
 - a. Any pesticide regulated by the Federal Insecticide, Fungicide, and Rodenticide Act;
 - b. Any food, food additive, color additive, drug, or cosmetic regulated by the Federal Food, Drug, and Cosmetic Act;
 - c. Any distilled spirits, wine, or malt beverage intended for non-industrial use regulated by the Federal Alcohol Administration Act; and
 - d. Any consumer product or hazardous substance regulated by the Consumer Product Safety Act.

B. Safety Data Sheets (SDSs)

1. All SDS information shall be forwarded by Shipping and Receiving to the EHS office when delivered to campus from the manufacturer or supplier of the hazardous substances.
2. Each SDS shall have 16 specific sections in compliance with the GHS.
3. The EHS Office shall provide access to the MSDSOnline database with instructions for use.
4. Departments may obtain assistance from the EHS Office for access to SDS information on hazardous substances present in the workplace. Departments shall maintain a copy of the SDS for each hazardous substance used in the department or ensure easy access to MSDSOnline. Departments shall ensure

that this information is readily accessible during each work shift to employees when they are in their work area(s).

5. If an MSDS is not provided by a manufacturer or not accessible on MSDS online, the EHS Office shall:
 - a. Send a request to the manufacturer within seven (7) working days from the date of the employee request.
 - b. Notify the employee within fifteen (15) days of receipt of the SDS and add the SDS to the MSDS online system.
 - c. Notify the Director of the State Department of Industrial Relations if a response has not been received from the manufacturer within twenty-five (25) working days from the date of the request.

C. Employee Information and Training

1. EHS shall provide all new employees Hazard Communication training, as part of the New Employee Safety Orientation (General Safety).
2. EHS shall provide employees with an explanation of what the SDS is, and of the contents of the SDS for any hazardous substance to which the employees are exposed, or equivalent form, either in written form or through online and in-person training programs.
3. Departments shall provide employees with information and training on hazardous substances in their work area at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
4. When training employees who may be exposed to hazardous substances, the department shall ensure that each of the following hazard communication training requirements are covered.

a. Safety Data Sheet (SDS)

Each department shall ensure the following information is explained, as outlined in the SDS:

- i. Any health hazards associated with the use of the substance or mixture.
- ii. Proper precautions for handling, necessary personal protective equipment or other safety precautions necessary to prevent or minimize exposure to the hazardous substance.
- iii. Emergency procedures for spills, fire, disposal, and first aid. This information may relate to an entire class of hazardous substances to the extent appropriate and related to the job.

b. Employee Rights.

Each department shall inform employees of their right:

- i. To personally receive information regarding hazardous substances to which they may be exposed.
- ii. For their physician or collective bargaining agent to receive such information.
- iii. Against dismissal or other discrimination due to the employee's exercise of their rights afforded by State law.

c. Hazard Communications

Departments shall ensure that employees are informed of:

- i. The requirements of the Hazard Communication Program.
- ii. Any operations in their work area where hazardous substances are present.
- iii. The location and availability of the written Hazard Communication Program.

Departments shall ensure that employees are trained in:

- i. The methods and observations that may be used to detect the presence or release of hazardous substance in the work area (such as monitoring conducted by the University, continuous monitoring devices, visual appearance or odor of hazardous substances when being released, etc.).
- ii. The physical and health hazards of the substances in the work area, and the measures they can take to protect themselves from these hazards. These measures shall include specific procedures the department has implemented to protect employees from exposure to hazardous substances, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.
- iii. The details of the Hazard Communication Program developed by the University, including an explanation of the labeling system and the SDS, and how employees can obtain and use the appropriate hazard information.

D. Trade Secrets

Under certain circumstances, the manufacturer may withhold the specific chemical identity, including the chemical name and other specific identification of a hazardous substance, from the SDS. However, when a treating physician determines that a medical emergency exists and the chemical identity is required for first aid treatment, the manufacturer must disclose the trade secret information to the physician.

E. Access to Hazardous Areas

1. Due to the potential for exposure to hazardous substances, designated areas on campus shall have limited access to University employees.
2. Hazardous areas are identified by signage on the location door. A contact person(s) is identified along with their phone number.
3. Work orders will indicate work is scheduled for a hazardous location. If you are called to a room while in the field, rooms can be identified with the poster.
4. If campus employees respond to an emergency call to a hazardous location during off hours, University Police must notify the contact person, Department chair, or EHS. If an emergency requires that the room be entered without clearance, use good judgment and proper protective equipment.
5. The Service Center will communicate with the contact to verify that the area has been cleared.
6. Work should not begin until the area is cleared of hazardous materials. If there are further questions about the safety of the area, notify EHS and/or the Chemical Hygiene Officer at ext. 7233.
7. If the area cannot be cleared of hazardous materials, personal protective equipment (PPE) shall be worn to avoid whatever hazard is involved. PPE is available from Material Control. Judgment should be used in all cases if there is a risk of exposure. Consult EHS for proper procedures and PPE.
8. Custodians should be in contact with persons in charge of hazardous locations to determine what areas can safely be cleaned.
9. In the event of a spill, immediately notify University Police by dialing 911 and EHS at ext. 7233. Immediately vacate the area.
10. Report breakage of any equipment or glassware to the contact person.

Appendix A – Health Hazard Definitions

Appendix B – Hazard Determination

Appendix C – Hazard Communication Program Definitions

Responsible Executive: Vice President for Administration and Finance
Responsible Office: Environmental Health and Safety
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Appendix A to CSUF Hazard Communication Program

Health Hazard Definitions

Although safety hazards related to the physical characteristics of a substance 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 substances 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 1982) 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 substances which meet any of the following definitions, as determined by the criteria set forth in Appendix B are health hazards:

1. Carcinogen: A substance 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 and Carcinogens published by the National Toxicology Program (NTP); or,
 - (c) It is regulated by OSHA as a carcinogen.

2. Corrosive: A substance that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. For example, a substance 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 substance falling within any of the following categories:
 - (a) A substance that has a median lethal dose (LD50) 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 substance that has a median lethal dose (LD50) 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 substance that has a median lethal concentration (LC50) 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 substance, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A substance 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 substance is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques.

5. Sensitizer: A substance that causes a substantial proportion of exposed people or animal to develop an allergic reaction in normal tissue after repeated exposure to the substance.
6. Toxic. A substance falling within any of the following categories:
 - (a) A substance that has a median lethal dose (LD50) 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 substance that has a median lethal dose (LD50) 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 substance that has a median lethal concentration (LC50) 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 substances 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: Substances which produce liver damage. Signs and Symptoms: Jaundice; liver enlargement. Substances: Carbon tetrachloride; nitrosamines.
 - (b). Nephrotoxins: Substances which produce kidney damage. Signs and Symptoms: Edema; proteinuria. Substances: Halogenated hydrocarbons; uranium.
 - (c). Neurotoxins: Substances which produce their primary toxic effects on the nervous system. Signs and Symptoms: Narcosis behavioral changes; decrease in motor functions. Substances: Mercury; carbon disulfide.
 - (d). Agents which act on the blood or hematopoietic system: Decrease hemoglobin function; deprive the body tissues of oxygen. Signs and Symptoms: Cyanosis; loss of consciousness. Substances: Carbon monoxide; cyanides.

- (e). Agents which damage the lung: Substances which irritate or damage the pulmonary tissue. Signs and Symptoms: Cough; tightness in chest; shortness of breath. Substances: Silica; asbestos.
- (f). Reproductive toxins: Substances which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (teratogenesis). Signs and Symptoms: Birth defects; sterility. Substances: Lead; dibromochloropropane (DBCP)-a pesticide.
- (g). Cutaneous hazards: Substances which affect the dermal layer of the body. Signs and Symptoms: Defatting of the skin; rashes; irritation. Substances: ketones chlorinated compounds.

Appendix B to CSUF Hazard Communication Program

Hazard Determination

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. Manufacturers, importers, and employers evaluating substances 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 substances 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 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 subsection 5194(d)(4) and Appendix A, a determination by the National Toxicology Program, the International Agency for Research on Cancer, or OSHA that a substance is a carcinogen or potential carcinogen will be considered conclusive evidence for purposes of this section.
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 substances 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 substance, shall be a sufficient basis for a hazard determination and reported on any material safety data sheet. The manufacturer, importer, or employer may also report the results of other scientifically valid studies which tend to refute the findings of hazard.

Appendix C to CSUF Hazard Communication Program

Hazard Communication Program Definitions

Access - The right and opportunity to examine and copy.

Article - A manufactured item: (1) Which is formed to 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; and (3) which does not release, or otherwise result in exposure to, a hazardous substance under normal conditions of use or in reasonable foreseeable emergency resulting from workplace operations.

CAS Number - The unique identification number assigned to specific chemical substances.

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

Combustible Liquid - Any liquid having a flashpoint at or above 100 °F (37.8 °C), but below 200 °F (93.3 °C), except any mixture having components with flash points of 200 °F (93.3 °C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

Common Name - Any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a substance other than by its chemical name.

Compressed Gas - (a) A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70 °F (21.1 °C); or (b) 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 (c) A liquid having a vapor pressure exceeding 40 psi at 100 °F (37.8 °C).

Container - Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous substance. For purpose of this program pipes or piping systems are not considered to be containers.

Designated Representative - Any individual or organization to whom an employee gives written authorization to exercise such employee's rights under this program. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization, except that access to records requires the employee's written consent.

Distributor - A business, other than a manufacturer or importer, which supplies hazardous substances to the University.

Employee - Employee shall mean any current University employee, former employee, student assistant, graduate assistant, or volunteer employee.

Explosive - A substance that causes a sudden, almost instantaneous release of pressure, gas, and heat when subject to sudden shock, pressure, or high temperature.

Exposure or Exposed - Any situation arising from a work operation where an employee may ingest, inhale, absorb through the skin or eyes, or otherwise come into contact with a hazardous substance.

Flammable - A substance that falls into one of the following categories: (a) "Aerosol, flammable" means an aerosol that, when tested 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; (b) "Gas, flammable" means a gas that, at ambient temperature and pressure, forms a flammable mixture with air; (c) "Liquid, flammable" means any liquid having a flashpoint below 100 °F (37.8 °C); (d) "Solid, flammable" means a solid, other than blasting agent or explosive, that is liable to cause fire through friction, absorption or 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.

Flashpoint - The minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite.

Foreseeable Emergency - Any potential occurrence such as, but not limited to, spills, fires, explosions, equipment failure, rupture of containers, or failure of control equipment which may or do result in a release of hazardous substance into the workplace.

Hazard Warning - Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the health hazards and physical hazards of the substance(s) in the container(s).

Hazardous Substance - Any substance which is a physical hazard or a health hazard or is included in the list of Hazardous Substances published by Cal/OSHA.

Health Hazard - A substance 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 substances which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, and agents which damage the lungs, skin, eyes, or mucous membranes. Appendices A and B provide further definitions and explanations of the scope of health hazards covered by this program, and describe the criteria to be used to determine whether or not a chemical is to be considered hazardous for purposes of this program.

Immediate Use - The hazardous substance 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.

Label - Any written, printed, or graphic material displayed on or affixed to containers or hazardous substances.

Manufacturer - A person who produces, synthesizes, extracts, or otherwise makes a hazardous substance.

Mixture - Any solution or a mixture of two or more substances, at least one of which is present as a hazardous substance, which do not react chemically with each other.

Oxidizer - A substance other than a blasting agent or explosive that initiates or promotes combustion in other materials, thereby causing fire, either to itself or through the release of oxygen or other gases.

Physical Hazard - A substance 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.

Pyrophoric - A substance that will ignite spontaneously in air at a temperature of 130 °F (54.4 °C) or below.

Safety Data Sheet (SDS) - Written or printed material concerning a hazardous substance.

Substance - Any element, chemical compound or mixture of elements and/or compounds.

Unstable (reactive) - A substance which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shock, pressure or temperature.

Use - To package, handle, react, or transfer.

Water reactive - A substance that reacts with water to release a gas that is either flammable or presents a health hazard.