

# **HAZARD COMMUNICATION PROGRAM**

## **1.0 INTRODUCTION**

## **2.0 APPLICATION OF THIS PROGRAM**

## **3.0 DEFINITIONS**

## **4.0 RESPONSIBILITIES**

**4.1 Supervisors, Laboratory Directors and Principal Investigators**

**4.2 Employees**

**4.3 Department of Environmental Health and Safety (EH&S)**

## **5.0 LABELING**

**5.1 General Requirements**

## **6.0 MATERIAL SAFETY DATA SHEETS**

**6.1 General Requirements**

**6.2 Obtaining MSDSs**

**6.3 Stanford University-Produced Hazardous Substances**

## **7.0 HAZARDOUS CHEMICAL INVENTORY**

**7.1 General Requirements**

**7.2 Life Safety Boxes (LSBs)**

## **8.0 INFORMATION AND TRAINING**

**8.1 General Hazard Communication Training**

**8.2 Other Required Hazard Communication Training**

## **9.0 NON-UNIVERSITY PERSONNEL**

**9.1 Providing MSDSs**

**9.2 Precautionary Measures**

**9.3 Labeling System**

## 1.0 INTRODUCTION

“Stanford University makes all reasonable efforts to:

1. Protect the health and safety of Stanford University faculty, staff, and students.
2. Provide safe work practices - academic, research, and administrative - for faculty, staff and students.
3. Provide information to faculty, staff, and students about health and safety hazards.
4. Identify and correct health and safety hazards and encourage faculty, staff, and students to report hazards.
5. Provide information and safeguards for those on campus and in the surrounding community regarding environmental hazards arising from operations at Stanford University.”<sup>1</sup>

To fulfill this University policy and to comply with the Cal/OSHA Hazard Communication Standard (California Code of Regulations, Title 8, Section 5194), this Hazard Communication Program has been developed to communicate information about hazards of substances employees use or come into contact with as part of their work. Components of the program include adequate labeling of hazardous substances in the workplace, providing information such as Material Safety Data Sheets (MSDSs) for hazardous substances, and training employees on chemical hazards in the workplace.

Requirements outlined in this manual are mandatory by the Cal-OSHA regulation where the word “**shall**” is used, and are advisory in nature where the word “**should**” is used.

## 2.0 APPLICATION OF THIS PROGRAM

The purpose of the Hazard Communication Program is to inform employees about hazardous substances in the workplace, potential harmful effects of these substances and appropriate control measures. The primary tools of this program are warning labels, MSDSs and employee training.

This Program does not apply to:

- a) Laboratories under the direct supervision and regular observation of an individual who has knowledge of the hazards and emergency procedures associated with the use of the hazardous substances and who conveys this knowledge to employees in terms of safe work practices. Such laboratories **shall** ensure that labels are not removed or defaced (See Section 5.0) and **shall** maintain MSDSs and ensure they are available to employees (See Section

---

<sup>1</sup> Health and Safety at Stanford University - Principles, Responsibilities, and Practices (Adopted by Stanford University Cabinet, April 1991).

- 6.0). *Laboratories that primarily provide quality control analyses for manufacturing processes or that produce hazardous substances for commercial purposes shall comply with the Program*
- b) Hazardous waste
  - c) Tobacco or tobacco products
  - d) Wood or wood products
  - e) Articles (see definition in Section 3.0)
  - f) Food, drugs or cosmetics intended for personal use
  - g) Retail food sale establishments
  - h) Consumer products used in the workplace when used as a normal consumer would use (i.e. White-Out, spray paint used for short, one-time applications).
  - i) Pesticides
  - j) Work operations where employees only handle substances in sealed containers  
(such as in warehouse, storage and transportation operations). However, this program does apply to these operations as follows:
    - **Labels:** Labels on incoming containers of hazardous substances **shall** not be removed or defaced.
    - **MSDSs:** Supervisors, laboratory directors and principal investigators **shall**:
      - maintain copies of any MSDS that are received with incoming shipments,
      - obtain an MSDS for sealed containers of hazardous substances received without an MSDS if an employee requests the MSDS, and
      - keep these MSDSs readily accessible to employees during their workshifts.
    - **Training:** Supervisors, laboratory directors and principal investigators **shall** ensure employees who handle sealed containers containing hazardous substances are provided with the required information and training so that they can protect themselves in the event of a spill or a leak.

### 3.0 DEFINITIONS

**Article:** A manufactured item (1) Which is formed to a specific shape or design during manufacture; (2) which has end use functions(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 a reasonably foreseeable emergency resulting from workplace operations.

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

**Emergency:** Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment, which may or does result in a release of a hazardous substance into the workplace.

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

**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 prepared by the Director pursuant to Labor Code section 6382.

**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 carcinogenic, 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 skin, eyes, or mucus membranes.

**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.

**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.

**Work area:** A room or defined space in a workplace where hazardous substances are produced or used, and where employees are present.

## **4.0 RESPONSIBILITIES**

### **4.1 Supervisors, Laboratory Directors and Principal Investigators**

Supervisors, laboratory directors and principal investigators are responsible for:

- a) Identifying hazardous substances present in the work area.
- b) Maintaining an inventory list of hazardous substances present in the work areas.
- c) Ensuring hazardous substances are appropriately labeled or posted.
- d) Obtaining MSDSs for hazardous substances used in the work area.

- e) Ensuring MSDSs are available to employees.
- f) Ensuring employees are trained on physical hazards, health hazards, emergency procedures, and safe handling procedures for hazardous substances used in the work area.
- g) Ensuring that employees follow established safety procedures.
- h) Adequately informing any non-University personnel sharing the same work area of the hazardous substances to which their employees may be exposed while performing their work.
- i) Maintaining a copy of this written program in the workplace.

## 4.2 Employees

Employees are responsible for:

- a) Knowing the hazards and precautionary procedures for the hazardous substances used in their work area.
- b) Attending required training.
- c) Planning and conducting operations in accordance with established procedures and good safety practices.
- d) Using personal protective equipment and clothing in accordance with prescribed training.

## 4.3 Department of Environmental Health and Safety (EH&S)

EH&S's Occupational Health and Safety Program is responsible for providing resources (i.e. reference materials) and technical support to ensure employees are protected from hazardous substances. Specific responsibilities include:

- a) Developing, implementing and evaluating the Hazard Communication Program.
- b) Assisting supervisors in identifying hazardous substances present in the work area and evaluating potential hazards of operations.
- c) Providing Hazard Communication training to supervisors.
- d) Assisting supervisors with employee training.
- e) Recommending appropriate engineering controls, administrative controls and personal protective equipment.

## 5.0 LABELING

### 5.1 General Requirements

The following requirements are for labeling hazardous substances:

- a) The manufacturer's original label **shall** provide:
  1. Identity of the hazardous substance;
  2. Appropriate hazard warnings; and
  3. Name and address of the manufacturer, importer or responsible party.
- b) Hazardous substances covered under this program (See Section 2.0) which leave the University **shall** be labeled as described in Section 5.1(a) above.

- i) All labeling should be done in a manner which does not conflict with the requirements of the Hazardous Materials Transportation Act (18 U.S.C. 1801).
- c) The original label **shall not** be removed or defaced unless the container is immediately marked with the required information.
- d) Labels **shall** be legible, in English, and prominently displayed on the container.
- e) Except as provided in Sections 5.1(f) and (g), each container of hazardous substances **shall** be labeled with the following information:
  - 1. Identity of the hazardous substance; and
  - 2. Appropriate hazard warnings.
- f) Instead of labels, alternative warning methods (e.g. signs, placards, operating procedures) may be used for individual stationary process containers as long as the identity of the hazardous substance and appropriate hazard warnings are provided.
- g) It is not necessary to label the secondary container if it is used immediately by the employee who performs the transfer (i.e. measured amount of chemical in a calibrated cylinder). In construction operations, the identity of the hazardous substance and appropriate hazard warnings **shall** be kept at the jobsite (i.e. the original label).
- h) Synthesized, unnamed chemicals developed at Stanford University which do not leave the University should be labeled with their reactants and possible products (e.g. Grignard reagent) or by a useful generic description (e.g. long-chain ketone) and their probable hazardous properties.
- i) Non-hazardous substances (e.g. distilled water) should be labeled in order to avoid confusion.

## 6.0 MATERIAL SAFETY DATA SHEETS

### 6.1 General Requirements

- a) An MSDS **shall** be available for every hazardous substance used in a work area and **shall** be accessible to employees during each work shift.
- b) An MSDS **shall** be provided by the manufacturer/ importer/ distributor with or before the initial shipment of the hazardous substance(s) and with or before the first shipment after an MSDS is updated.
- c) If the MSDS is not provided with the shipment, the purchaser (e.g. laboratory supervisor, shop supervisor) **shall** obtain one from the manufacturer, importer or distributor prior to use of the purchased material.
- d) MSDSs **shall** be in English and contain the following information:
  - 1. Identity of the substance;
  - 2. Physical and chemical properties;
  - 3. Physical hazards;
  - 4. Health hazards;

5. Potential routes of entry;
  6. Exposure limits;
  7. Carcinogenicity (NTP or IARC);
  8. Precautions for safe handling and use;
  9. Control measures;
  10. Emergency and first aid procedures;
  11. Date of preparation of the MSDS;
  12. Name, address and telephone number of the manufacturer, importer, employer or other responsible party; and
  13. Description in lay terms of the specific potential health risks.
- e) If employees travel between workplaces, the MSDSs may be kept at a central location (e.g. shop). However, employees **shall** be able to obtain the required information in an emergency.
- f) Hazardous substances covered under this program developed at Stanford University **shall** have an MSDS prepared before shipping offsite.

## **6.2 Obtaining MSDSs**

Employees can obtain MSDSs from the following sources:

- a) Online: <http://msds.stanford.edu>
- b) Supervisor
- c) EH&S (phone: 3-0448)

## **6.3 Stanford University-Produced Hazardous Substances**

- a) MSDS and labeling requirements apply to hazardous substances synthesized at Stanford University and sent offsite. Contact the EH&S Hazardous Materials Management Program (x3-0448) for assistance and further details on these requirements.

## **7.0 HAZARDOUS CHEMICAL INVENTORY**

### **7.1 General Requirements**

- a) University laboratories, departments and shops **shall** maintain an inventory of hazardous substances present in their areas. The identities of the hazardous substances on the inventory lists must correspond with the identities on their corresponding MSDSs.
- b) Inventories must be maintained using the on-line inventory system provided by EH&S. Contact EH&S Hazardous Materials Management Program (x3-0448) for additional information.

### **7.2 Life Safety Boxes (LSBs)**

- a) Inventory reports are provided by EH&S for inclusion in Life Safety Boxes (LSBs), which are located outside of the door to each laboratory and shop.
- b) LSBs contain: a report of the quantities of each Main Hazard Class present in the room, a map showing the location of the hazardous

materials in the room, and the names and phone numbers of emergency contacts.

- c) Stickers indicating the hazards present inside a lab are placed on the outside of the LSB.

## **8.0 INFORMATION AND TRAINING**

- a) All faculty, staff and students who may come into contact with hazardous chemicals **shall** be trained in safe handling procedures, health and safety hazards, labeling, MSDSs and personal protective equipment.

### **8.1 General Hazard Communication Training**

#### **8.1.1 Contents of Training**

Employees **shall** be trained on and informed of:

- a) Requirements of the Hazard Communication regulation;
- b) Any operations in the work area where hazardous substances are present;
- c) Location and availability of the written hazard communication program, including lists of hazardous substances and MSDSs;
- d) Methods and observations that may be used to detect the presence or release of a hazardous substance in the work area;
- e) Physical and health hazards of the substances in the work area, and the measures employees can take to protect themselves from these hazards (i.e. appropriate work practices, emergency procedures and personal protective equipment);
- f) Details of Stanford University's Hazard Communication Program; and
- g) The right:
  - 1. To personally receive information regarding hazardous substances to which they may be exposed;
  - 2. For their physician or collective bargaining agent to receive information regarding hazardous substances of concern; and
  - 3. Against discharge or other discrimination due to exercising the rights under the Hazard Communication Standard (8 CCR 5194).

#### **8.1.2 Frequency of Training**

Employees **shall** be trained on hazardous substances in their work area:

- a) Upon initial assignment and
- b) Whenever a new hazard is introduced into the work area.

**8.1.3 Recordkeeping of Training:** Training records **shall** be maintained by the Supervisor for at least one year.

## 8.4 Other Required Hazard Communication Training

**8.2.1 Non-Routine Operations:** Supervisors, laboratory directors and principal investigators **shall** establish procedures that will be used to inform employees of the hazards and safety procedures for non-routine tasks and operations involving substances contained in unlabeled pipes in their work area.

## 9.0 NON-UNIVERSITY PERSONNEL

This section applies to non-University personnel working on the Stanford University campus (i.e. contractors, consultants, and visitors). The primary University contact (i.e. supervisor, laboratory director, principal investigator, project manager) **shall** provide the non-University person with information about hazardous substances that he/she may be exposed to while performing work at Stanford University as follows:

- 9.1 Providing MSDSs:** The primary contact **shall** ensure that the non-University personnel are provided access to MSDSs for each hazardous substance he/she may be exposed to while working.
- 9.2 Communicating Precautionary Measures:** The primary contact **shall** ensure that the non-University personnel are informed of any precautionary measures that need to be taken to protect them during normal operating conditions and in foreseeable emergencies.
- 9.3 Labeling System:** The primary contact **shall** ensure that non-University personnel are informed of the labeling system used at Stanford University.