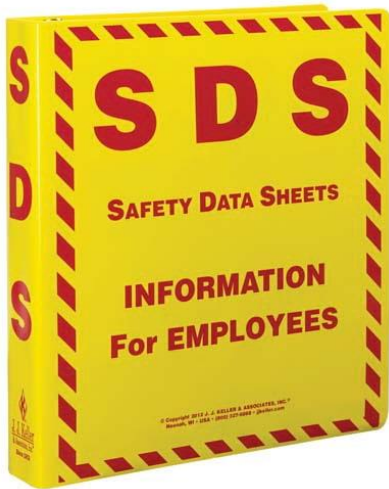


Yale University

Environmental Health and Safety

HAZARD COMMUNICATION PROGRAM



Hazard Communication Program

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Appendix A: Training Program

Section I - Introduction

Under the Occupational Safety and Health Administration's Hazard Communication Standard (HCS), 29CFR1910.1200, employers must establish and maintain a program to evaluate and communicate the hazards of chemicals in the workplace. This standard requires that employers establish information and training detailing hazardous properties of chemicals in the workplace, safe handling procedures, and measures to be taken to protect workers from these chemicals. The standard also addresses the labeling of chemical containers and the management of information sheets. OSHA revised this Hazard Communication Standard to align with the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and published it in the Federal Register in March 2012. This change was made to increase the quality and consistency of chemical safety information by adopting a standardized approach to hazard classification, labels, and safety information.

This written Hazard Communication Program outlines how Yale University is complying with all of the elements of the Hazard Communication Standard (HCS).

Research laboratories where relatively small amounts of chemicals are used in a non-production basis are exempt from the requirements of this program, but are required to comply with the elements of Yale University's Chemical Hygiene Plan (CHP).

Section 2: Scope

2.1 Employees Covered

This Program covers workers employed by Yale University who may be exposed to hazardous chemicals under normal operating conditions or reasonably anticipated emergencies. Workers who encounter hazardous chemicals only in non-routine, isolated instances, are not covered by this Program.

2.2 Research Laboratory Exemption

This Program does not apply to research laboratories where small quantities of chemicals are used on a non-production basis. Instead, such laboratories must follow the OSHA Laboratory Standard (29CFR1910.1450), and are covered by the Yale University Chemical Hygiene Plan. Employees in research laboratories have been provided with information on the standard and how to access the standard. They have also been made aware of the contents of the CHP and its availability in the Yale Environmental Health and Safety office and on the website (<http://ehs.yale.edu/>).

2.3 Substances Covered

All substances located at Yale University which pose a physical or health hazard are included, except those specifically exempted by this Standard. Exempted substances include hazardous wastes, consumer products, and articles as defined by OSHA.

Section 3: Responsibilities

3.1 General

Responsibilities for compliance with this program are as follows:

Yale Environmental Health and Safety (EHS)

- Developing and periodically updating the written Program;
- Developing and implementing training programs that comply with the requirements of the standard and also accommodate the needs of individual departments; and
- Provide updated information and training as necessary.

Individual Departments

- Ensuring that all employees receive Hazard Communication training prior to working with hazardous chemicals at their work site;
- Ensuring that all applicable containers are labeled appropriately;
- Keeping updated lists of chemicals in their work area; and
- Maintaining a current file of Safety Data Sheets for hazardous chemicals and products used in the workplace.

Employees

- Attending required safety training;
- Reading chemical labels and Safety Data Sheets when necessary and following their instructions and warnings; and
- Asking for assistance if there are any questions or concerns that have not been answered by training, container labels, or SDSs.

3.2 Identification of Potentially Exposed Employees

Department managers, lead administrators, and area supervisors are responsible for identifying employees who may be exposed to hazardous chemicals either under normal working conditions or in reasonably anticipated emergencies. Identification of these employees may be based on various criteria including job descriptions or recommendations of supervisors. For the purposes of this program, potentially exposed employees often include:

- a) Facilities staff including custodial, utilities, grounds maintenance, and physical plant trade workers and activities.
- b) Stockroom, shipping, and receiving personnel who handle hazardous chemicals.
- c) Emergency response personnel including police, fire, and other safety personnel.
- d) Personnel who regularly work in proximity to hazardous chemicals during regular work functions.
- e) Other departments where chemical handling may occur, such as dining hall, publishing and printing, art and library conservation, and drama department.

f) Clinical and other non-research laboratories

Employees who encounter hazardous chemicals in non-routine, isolated instances, such as office workers, security personnel, mail clerks, or faculty, are not covered by this Program.

Section 4: Document Locations

4.1 Hazard Communication Plan

A hard copy of this Program is located at the Yale University Environmental Health and Safety office, 135 College Street, and is accessible between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday. It is also available on the web at <http://ehs.yale.edu/>.

4.2 Safety Data Sheets (SDS)

Each department covered by this standard must maintain SDSs for hazardous products they have or use. These SDSs may be reviewed and printed by any employee of Yale University, or their designated representative, free of charge, regardless of whether they have been exposed to that material. Yale EHS subscribes to MSDSOnline, a chemical information management system. All Yale personnel can access SDSs from any Yale computer through this system. MSDSOnline is available on the EHS website at <http://ehs.yale.edu/>.

Section 5: Safety Data Sheets

5.1 General Information - Update to the MSDS Requirement

Safety Data Sheets (SDSs), formerly called Material Safety Data Sheet (MSDSs) provide basic safety information about a specific chemical substance or product. In March 2012, OSHA revised the requirements for providing safety information on chemicals. As part of this revision, the format and required content of these informational sheets were standardized. The new MSDSs are called Safety Data Sheets (SDSs) under this standard. Manufacturers were required to provide these standardized SDSs by June 2015.

For the purposes of this written program, MSDSs will now be referred to as SDSs.

5.2 Safety Data Sheets (SDS)

The revised Hazard Communication Standard requires that the information on the SDS be presented using specific headings in a specified sequence. The phrases used in SDSs are all standardized to ensure clarity and consistency between manufacturers. As of June 2015, all newly purchased chemicals must be accompanied by an updated SDS. These SDSs must contain the following 16 sections, in this order:

- Section 1. Identification

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

5.3 Purchasing and Receiving Procedures

Vendors and manufacturers are expected to provide Safety Data Sheets with the hazardous chemicals and products supplied to Yale University, including samples. New copies must be sent to the specific ordering department at Yale University whenever revisions are made to the Safety Data Sheet. Individual departments are responsible for securing an SDS if it is not sent by the manufacturer.

5.4 Accessibility

- SDSs are immediately accessible to employees at all times during their work shift. Employees can access MSDSonline, the SDS repository which the University subscribes to, from any Yale networked computer. This includes computers in their department and elsewhere on campus. MSDSonline's "e-binder" system has been used to organize the SDSs for all departments. It is accessed through the EHS website at <http://ehs.yale.edu/>. In some areas, binders containing paper copies of SDSs for chemicals used in specific departments may also be available. All staff area trained on how to access Safety Data Sheets for the chemicals they may use.
- Employees can also request SDSs by contacting their supervisor or EHS. The SDS will be provided to them during their work shift.
- Yale University will make provide SDSs to all employees and to anyone who may request it, not only those who are covered by this program.
- SDSs are available to outside contractors upon request.

5.4 Replacement of Safety Data Sheets

Manufacturers and vendors are required to replace out of date or incorrect data sheets. The MSDSOnline program automatically updates the Safety Data Sheets with the most recent copy from the manufacturers or vendors. It is the responsibility of each department which has a binder of paper SDSs to periodically review and update those SDSs. Responsibility for the accuracy of an SDS rests solely with the originator of the Safety Data Sheet. All SDSs must conform to the updated 16 section format required by OSHA.

5.5 Creation of a Safety Data Sheet

In the event that Yale University needs to create an SDS, Yale EHS should be consulted for assistance. This would only be required if a University worker or student is producing a new chemical and sending it elsewhere to be used.

Section 6: Training

6.1 Introduction

All potentially exposed employees must be given information and training on the handling and safe use of hazardous chemicals in their work area. This training is given prior to their working with the hazardous chemicals, and whenever a new chemical hazard is introduced into their work area. Appendix A provides an outline of a typical hazard communication training class. All hazard communication training provided to Yale University staff includes the required information on the updated standard, including label elements, pictograms, and the safety data sheet format.

6.2 Training Materials

Yale Environmental Health and Safety has training programs available in a variety of formats to fit the audience receiving the training. Hazard Communication training is given in classroom settings, is available on-line, and is given in conjunction with many annual departmental safety training programs.

6.3 Training Circumstances

Exposed employees must be trained under the following circumstances:

- a) All workers, covered by this standard, who are exposed to hazardous materials at work. This includes:
 - New employees
 - Transferred employees
 - Whenever new hazards are introduced into the work area
- b) Workers will receive at least their normal rate of pay to attend hazard communication training, which is provided at no expense to the employee.
- c) Hazard communication/chemical safety training, including the elements required by the update of this standard, is repeated department-wide on a periodic basis to many of the affected departments.

6.4 Hazard Communication Training Providers

- a) Environmental Health and Safety Professional Staff
- b) Web-based training developed by Yale EHS on the EHS website
- c) Departmental Managers/ Supervisors/ Designated Trainers may provide this training to covered employees only after they have been trained to do so by Yale Environmental Health and Safety or a qualified member of their Department.

6.5 Attendance Records

A paper record of attendance that includes the name, Net ID, and department of each employee attending in-person training on hazard communication will be taken and kept on file at Yale Environmental Health and Safety. Attendance for the web-based training is recorded in the e-learning module. A computerized training record is also kept for each safety course, in-person sessions as well as web-based courses, taken by each employee and is managed by the University's Training Management System (TMS).

Section 7: Container Labeling

7.1 General Requirements – Labels prior to June 2015

All containers of hazardous chemicals must be properly labeled in accordance to the requirements of this standard. The label and information must be in English. For containers purchased before June 2015, labeling requirements must include the following, at a minimum:

- a) Identity of hazardous chemical.
- b) Appropriate hazard warning, including both physical and health hazards.
- c) Name and address of chemical manufacturer, importer, or other responsible party.

7.2 General Requirements – Labels on Chemicals purchased after June 2015

OSHA adopted a new hazardous chemical labeling requirement as a part of its recent revision of the Hazard Communication Standard. These changes were enacted to help ensure improved quality and consistency in the classification and labeling of all chemicals, and to enhance worker comprehension. The revised standard requires that information about chemical hazards be conveyed on labels using quick visual notations to alert the user, providing immediate recognition of the hazards. Labels must also provide instructions on how to handle the chemical so that chemical users are informed about how to protect themselves.

Under the revised standard, all chemical containers purchased after June 2015 must be labeled with the following information:

- a) product identifier

- b) signal word (Danger or Caution)
- c) standardized hazard statement(s)
- d) standardized precautionary statement(s)
- e) pictogram(s)
- f) name, address and telephone number of the chemical manufacturer, importer, or other responsible party.

Inspection of Incoming Containers

Shipping and receiving personnel and others involved in unpacking chemicals are trained by their managers or supervisors to inspect each incoming container to insure that when it is received, each container is labeled in accordance with University's HCS regulations. EHS should be notified of any containers that do not conform to the above requirement.

7.3 Secondary Containers

A secondary container is one that is used to transfer hazardous chemicals from a primary container for more convenient use. Secondary containers of hazardous materials must be labeled according to requirements listed above. However, secondary containers into which hazardous chemicals are transferred from labeled containers and which are intended for only the immediate use of the employee who performs the transfer are exempt from the labeling requirements. Once the container is left unattended, it must be properly labeled with the identity and complete hazard warning.

7.4 Placarding

The employer may use signs, place cards, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers as long as the alternative method identified the container to which it is applicable and conveys the required information.

Section 8: Non-Routine Tasks

When an employee is to perform a non-routine task presenting hazards for which he or she has not already been trained, the employee's supervisor will be responsible for discussing with the employee the hazards of the task and any special measures, including personal protective equipment or environmental controls, that should be used to protect the employee. Yale Environmental Health and Safety will assist with the training for non-routine tasks, as necessary.

Section 9: Contractors

Information on the requirements for outside contractors regarding the HCS can be found in the Yale University Contractor Health & Safety Guidelines (<https://ehs.yale.edu/>).

Appendix A: Training Program Outline – Chemical Safety for Non-Laboratory Workers,
“HAZCOM 2012”

1. Hazard Communication Standard
 - A. Scope and Application
 - B. Components
 - C. Availability and Accessibility of Information
 - D. HAZCOM 2012 Requirements
 - New Label Elements
 - SDS Format
 - Pictograms
2. Chemical Hazards
 - A. Physical and Health Hazards
 - B. Acute vs. Chronic
 - C. Routes of Exposure
 - D. Signs and Symptoms of Overexposure
3. Chemical Incidents
 - A. Methods to Detect the Presence or Release of Hazardous Chemicals
 - B. Emergency Equipment and Procedures
 - C. Spill Cleanup Information
 - D. Notification Procedures
4. Protective measures
 - A. Personal Protective Equipment
 - B. Ventilation
 - C. Safety Equipment
5. Chemical Waste
 - A. Hazardous Waste Disposal
 - B. Disposal Policies and Procedures
6. Question and Answer Period