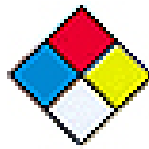


## University of Louisville

### Hazard Communication Program



**If you have questions or require assistance with completing or implementing this plan, please contact the University of Louisville Department of Environmental Health and Safety (DEHS), Industrial Hygiene Section.**

**[Industrial Hygiene Manager: 852-2949](#)**

**[Industrial Hygienist: 852-2961](#)**

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## University of Louisville

### Hazard Communication Program

#### Introduction

The Occupational Safety and Health Administration (OSHA) enacted the [Hazard Communication Standard, 29 CFR 1910.1200](#) (App A) initially in 1988 with a revision in 1994. The Standard requires that the hazards of all chemicals be evaluated and that the information concerning their hazards is transmitted to employers and employees. The regulation stipulates employers develop a hazard a communication program that describes the methods used to convey this information to employees. The program must include the use of material safety data sheets, labeling and employee training.

The UofL written Hazard Communication (Haz Com) Program describes the methods used to ensure employees are provided with the appropriate chemical hazard information. This program establishes rights and responsibilities for departments, supervisors, and employees to accomplish this task. This document addresses only the general measures necessary to achieve compliance. Implementation of the Program requires that each department, unit or group covered under this Haz Com program develop a unit-specific plan for the chemical hazards encountered in that work area.

A fill-in-the-blank template for completing a unit-specific plan is included in this document. To avoid repetition of information, the unit-specific template does not include the same level of detail as the UofL Haz Com Program. The responsible supervisor will need to refer to the UofL Haz Com Program in conjunction with the Unit-Specific HazCom Plan to ensure compliance with all aspects of the program. Specialized terms used in the OSHA Standard and this Haz Com Program document can be found in a list of [definitions](#) (App. B).

#### [Template for Unit-Specific Hazard Communication Plan](#) (App. C)

#### Purpose

The purpose of the University of Louisville Hazard Communication Program is to ensure that all UofL employees who use hazardous chemicals are provided with information concerning those hazards. This written program describes in detail how, that information is transmitted to employees.

This program is designed to assist university departments, units, and working groups to meet the compliance requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard.

#### Scope

This Hazard Communication (Haz Com) Program applies to all UofL Departments, units, and groups and all employees at risk of occupational exposure to hazardous chemicals present in the workplace. The program applies to any hazardous chemical that 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.

**Exemption:** Laboratories are covered under the OSHA Laboratory Standard and are subject to the [UofL Chemical Hygiene Plan](#) requirements, not Haz Com requirements. Contact the [Laboratory Safety Coordinator](#) at 852-2830 for additional information.

## **Program Responsibilities**

### **University of Louisville**

It is the responsibility of University of Louisville, as an employer, to take every reasonable precaution to provide a work environment that is free from recognizable hazards and therefore, UofL fully supports this Hazard Communication Program.

### **Department of Environmental Health and Safety**

The Department of Environmental Health and Safety (DEHS) is responsible for the development and administration of the University of Louisville Hazard Communication Program. DEHS will:

- Serve as the university authority and source of information for the UofL Hazard Communication Program
- Develop and evaluate the written University of Louisville Hazard Communication program
- Develop and provide the University of Louisville Hazard Communication training program
- Provide consultation, exposure evaluation, industrial hygiene surveys, workplace assessments or other services as needed or requested by departments or supervisors
- Evaluate the ongoing effectiveness of the Departmental Hazard Communication plans

### **Departments**

Departments whose employees may be exposed to hazardous chemicals are responsible for providing the necessary and appropriate resources, including personnel, equipment and financial support to ensure a proper hazard communication plan is developed and implemented.

- Assign the Responsible Supervisor(s) for the effected area(s)
- Provide all necessary resources to implement an effective Hazard Communication Plan. (i.e. storage for MSDSs, labels, signs)

- Provide appropriate engineering controls as feasible. Conduct annual reviews to ensure that the Hazard Communication plan is up to date and being effectively implemented
- Ensure continuity of recordkeeping, especially when supervisors leave or are reassigned.

### **Responsible Supervisors**

The Responsible Supervisor (i.e. PI, supervisor, foreman, project director, or manager) is ultimately responsible for ensuring that the unit-specific Hazard Communication plan is completed and is understood and followed by the employees under their charge. While the supervisor is *responsible* for implementing each of the elements described within the written Hazard Communication Plan, it is permissible to delegate some *tasks* to other capable employees, provided the roles are clearly documented and understood.

- Complete the unit-specific Hazard Communication Plan for their area and employees
- Identify and list in the chemical inventory all hazardous chemicals as defined under this program, used or generated in their work area and operations.
- Collect and maintain MSDSs for each hazardous chemical used or created in the work area.
- Ensure all hazardous chemical containers are properly labeled
- Identify the employees who may be exposed to hazardous chemicals in their work area
- Provide appropriate protective measures including engineering controls and/or Personal Protective Equipment (PPE) for each employee
- Ensure that each of their employees receives Hazard Communication training, consisting of both general and unit specific chemical hazard information; including non-routine work activities and emergencies
- Provide on-going training when new chemical hazards are introduced and when new employees may encounter chemical hazards
- Ensure employees are informed of chemical hazards they may encounter due to contractor(s) activities in the area, and inform contractors of chemical hazards they may encounter on UofL facilities
- Conduct ongoing work-site evaluations and recordkeeping reviews as necessary to ensure that the written plan is effectively implemented

## Employees

All employees performing work with hazardous chemicals must accept a responsibility for operating in a safe manner. Employees also have the responsibility to inform their supervisors of working conditions, accidents, work practices they believe hazardous to their health or health of others.

Employees are responsible for the following:

- Attending Hazard Communication training
- Using hazardous chemicals in accordance with instructions on the label and on the Material Safety Data Sheet
- Labeling containers appropriately when transferring hazardous chemicals to secondary containers
- Practicing safe work habits
- Notifying their supervisor of unsafe conditions

## Chemical Inventory

The supervisor or designee is responsible for identifying and listing all hazardous chemicals, used or generated in their work area, in the chemical inventory.

The Chemical Inventory also serves as a list of all materials for which a MSDS must be maintained, and is the initial step, necessary for completion of the rest of the program. Compiling the chemical inventory is not a one-time effort. Like all components of the HazCom plan, the inventory must be updated and maintained as MSDSs are updated, chemicals are substituted or no longer used or new chemicals are brought on site. The [Chemical Inventory Form](#) is provided to assist in completing and maintaining the Chemical Inventory.

### Preparing the chemical inventory

An initial approach to prepare a chemical inventory is to survey the workplace. In developing the chemical inventory, identify hazardous chemicals in containers, including pipes, processing units, and tanks. The broadest possible perspective should be taken when doing the survey. Often "chemicals" are thought of as being only liquids in containers. The HazCom program covers chemicals in all physical forms - liquids, solids, gases, vapors, fumes, and mists - whether they are "contained" or not. The hazardous nature of the chemical and the potential for exposure are the factors that determine whether a chemical is covered. If it's not hazardous, it's not covered. If there is no potential for exposure (e.g., the chemical is inextricably bound and cannot be released), the rule does not cover the chemical. If you have questions about specific items please contact DEHS, Industrial Hygiene Section.

Contaminants generated in the workplace such as welding fumes (generated when welding metals) and dusts (sawing or sanding wood) are also potential sources of exposure, and must be listed on the chemical inventory.

### **Identifying hazardous chemicals in the work area**

A key component of the hazard communication program is differentiating between hazardous and non-hazardous materials. The primary responsibility for evaluating hazards is placed on the manufacturers and importers who are required to evaluate the chemicals they produce or import by determining if the chemicals are physical or health hazards. If a chemical meets any of the criteria as a physical or health hazard, the manufacturer must **label** the container with hazard information.

Any chemical or product that has been determined by the manufacturer to be a hazardous chemical (i.e. label gives hazard warning information) must be included in the Chemical Inventory, unless it is exempt (see exempted materials list below).

#### *Exempted Materials*

The OSHA standard exempts a number of items, which therefore do not have to be included in the HazCom Plan nor be listed in the Chemical Inventory.

- Hazardous Waste (see [UofL Hazardous Waste Web page](#) for additional information)
- Any consumer product, which is used in the work place as intended by the manufacturer, and used in the same manner of a typical consumer.
- Articles, if under normal conditions of use it does not release more than minute or trace amounts of a hazardous chemical and does not pose a physical hazard or health risk to employees. (for example: stainless steel table, vinyl upholstery, tires, adhesive tape)
- Wood or wood products which would not be processed (chemically treated wood that would be sawed or cut, generating dust and potential exposure, is not exempt)
- Food or alcoholic beverages, intended for retail sale or personal consumption
- Any drug when in solid final form, for direct administration to patients (pills, or tablets) or packaged for sale to consumers (e.g. over-the-counter drugs) and drugs intended for personal consumption
- Cosmetics, packaged for sale to consumers and cosmetics for personal use
- Tobacco or tobacco products
- Nuisance particulates
- Ionizing and non-ionizing radiation
- Biological hazards

OSHA defines a **hazardous chemical** as any chemical that is a *physical hazard* or *health hazard*.

### **Physical Hazards**

Physical hazard means a chemical this is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, and oxidizer, pyrophoric, unstable (reactive) or water-reactive.

### **Health Hazards**

Health hazard means any chemical that causes acute or chronic health effects in exposed employees. It includes chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, and neurotoxins, agents that act on the hematopoietic system and agents that damage the lungs, skin, eyes or mucous membranes.

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

The supervisor or designee is will ensure that all Material Safety Data Sheets are available for every hazardous chemical used in the work area and are available to employees on all work shifts.

The supervisor or designee will determine the method used to organize, store, and maintain the MSDSs as described in the unit-specific plan.

- Current MSDSs are maintained and are checked regularly (indicate time frame, as appropriate for chemical use, minimum is annual) to ensure there is a corresponding and current MSDS for each chemical on the Chemical Inventory
- If there are MSDSs for chemicals that are not on the Chemical Inventory, or the reciprocal, the supervisor or designee will determine the reason for the discrepancy (i.e. the chemical is no longer used, chemical overlooked during inventory) and take the necessary corrective action
- An MSDS must be provided with or prior to the initial shipment of any hazardous substance and with or before a shipment for which an MSDS has been updated
- If an MSDS is needed from the supplier, the supervisor or designee will contact the supplier by telephone and request the missing MSDS be sent via e-mail, fax or regular mail.
- When an MSDS is received, review it for changes in health and safety information, notify employees of changes as needed, file and add to Chemical Inventory as appropriate
- Store old MSDSs for chemicals that are no longer in use or no longer present in the work area in an archive file, indicating the dates the material was used.

MSDSs can be in any format, as long as all of the required information is included, and must be in English. This requirement does not prevent a chemical manufacturer or employer from translating MSDSs from English into other languages, in order to assist non-English speaking employees with training, comprehension and hazard recognition.

MSDSs must contain the following information:

- Product or Chemical Identity used on the label
- Chemical and common names of hazardous ingredients (applies to mixtures)
- Name, address and phone number for hazard and emergency information
- Physical and chemical properties and characteristics (i.e. boiling point flash point)
- Physical hazards (flammability, explosion and reactivity)
- Health hazards including signs and symptoms of exposure
- Potential routes of entry (inhalation, ingestion, skin exposure)
- OSHA Permissible Exposure limits (PEL), ACGIH Threshold Limit Values (TLV)
- Carcinogenicity (NTP or IARC)
- Precautions for safe handling and use
- Control measures
- Emergency and first aid procedures
- Date of MSDS preparation

Employees **are not to use any hazardous chemical until an MSDS is obtained**, and they have been instructed in the chemicals hazards and safe handling methods.

An MSDS contains very technical information. Moreover, it is essential that the supervisor understand the significant information about each chemical to ensure employees are provided appropriate information for the safe handling and use to reduce the risk of chemical exposure. The Department of Environment Health and Safety is available to help supervisors understand the information contained on an MSDS.

Some suppliers provide MSDSs for non-hazardous products; however, these MSDSs do not need to be maintained, but may be advisable, to document the absence of hazardous components.

If a sales person supplies a sample of a hazardous chemical product, the container must be labeled, an MSDS must accompany the product if the product is used, and it should be listed on the chemical inventory.

## Labels

Labels provide an immediate warning of the hazards which employees may be exposed and provide a link to more detailed information (i.e. MSDS).

OSHA requires that all hazardous chemicals be labeled appropriately to convey the appropriate hazard information to employees. It is the responsibility of the manufacturer or importer to ensure that information is accurate. The responsible supervisor or the designee must ensure these containers are properly labeled when they arrive on site and that they remain so throughout their use.

The supervisor or designee will ensure that every container entering the work site bears the required label. The label must include the:

- Identity of the chemical
- Appropriate hazard warnings, including target organ effects
- Name and address of the manufacturer, importer or distributor

## Hazard Warnings

Hazard warnings on labels may consist of words, pictures, symbols, or a combination thereof, which provide the specific physical or health hazards, including target organ effects, of the chemicals in the container.

**Never work with a chemical until you understand the potential hazards and know how to handle it safely**

The label is intended to be an immediate visual reminder of the hazards of the chemical in the container. It is not necessary that every hazard presented by a chemical be listed on the label. The MSDS is used for this purpose.

Products that are subject to EPA regulations (i.e. insecticides, fungicides, rodenticides, and disinfectants) and FDA regulations (i.e. food, food additives and drugs) must be labeled according to those agencies regulations. There is no need to re-label these containers for Hazard Communication compliance.

## Primary Containers

The primary information to be obtained from an OSHA-required label is an identity (name) for the material, and appropriate hazard warnings. The identity is any term that appears on the label, the MSDS and the list of chemicals, and thus links these three sources of information. The identity used by the supplier may be a common or trade name ("Joe's Formula 13"), or a chemical name (Acetone). The hazard warning is a brief statement of the

hazardous effects of the chemical ("flammable," "causes lung damage"). Labels frequently contain other information, such as precautionary measures ("do not use near open flame"), but this information is provided voluntarily and is not required by the rule. Labels must be legible, and prominently displayed. There are no specific requirements for size or color, or any specified text.

### **Secondary Containers**

If any chemical is transferred to another container, the new or secondary container must be labeled. The label on the secondary container must contain the same information required for the label on the original container. There are several acceptable methods to label a secondary container:

- Applying a photocopy of the original label to the secondary container
- Applying a duplicate label provided by the manufacturer
- Applying a legible handwritten label

### **Secondary Labeling Exemption**

It is not necessary to label the secondary container if the employee who performs the transfer is the *only person* who uses the chemical from the new container, during their work shift.

However, it is highly recommended that all containers be labeled to avoid confusion and possible harm to employees. This recommendation includes non-hazardous chemicals as well. For example, an unlabeled container of distilled water may look similar to a container of Isopropyl Alcohol, and labeling in this instance would be clearly helpful in distinguishing the two.

In situations where a tank truck, rail car or similar vehicle comprises the container for a hazardous chemical, the labeling information may be posted on the outside of the vehicle or attached to the accompanying shipping papers or bill-of-landing. A label may not be sent separately, even if prior to shipment.

In-house containers such as pipes, storage tanks and process vessels containing hazardous chemicals must also be labeled. Alternative labeling systems can be used, as long as it is readily available to the employees in the area throughout each work shift. This does not include MSDSs in lieu of labels.

Other forms of labeling include:

- Signs
- Placards
- Process Sheets
- Batch Tickets
- Operating Procedures

## **Non-Routine Tasks and Emergencies Involving Hazardous Chemicals**

Periodically employees may be required to perform non-routine tasks (e.g., infrequent cleaning operations, maintenance activities, special projects, etc.) in which they may encounter hazardous chemicals.

Prior to the start of a non-routine project, the supervisor or designee will provide training for each effected employee, including specific hazards of the materials that he or she may encounter during the activity.

The hazard information will include protective measures the employee can use such as PPE, and what safety measures may be used including ventilation, air monitoring, buddy systems, emergency rescue procedures, confined space entry procedures.

Supervisors should plan for foreseeable emergencies (e.g. spills, fires, power outages, etc.) and train employees on the appropriate actions.

## **Working with Contractors**

Outside contractors are utilized by many UofL departments for a variety of activities including: construction, renovation, testing and maintenance. There is a reciprocal responsibility between UofL and the contractor to fulfill the requirements of the Hazard Communication Standard.

The UofL employee who coordinates/oversees the work of a contractor must advise the contractors of their responsibility to provide appropriate hazard information (MSDSs) for all hazardous chemicals brought onto UofL.

Likewise, it is the responsibility of the that individual to provide the contractor with information about the hazardous substances to which they may be exposed while at a UofL site, and if applicable, the labeling system in use, protective measures to be taken, safe handling procedures, and the location and availability of MSDSs.

## **Building-Related Hazards**

Contractors and Physical Plant personnel perform the majority of renovation work in U of L buildings. However, employees in other units may also need to disturb installed building materials for various purposes, so this information applies universally.

- **Asbestos**
  - Asbestos fibers were added to many building materials prior to the 1980's when some uses of asbestos were banned. Pipe insulation, floor tile, ceiling tile/board, drywall/joint compound, laboratory cabinet tops, transite board, glues, mastics and caulks are some of the more common building materials that may contain asbestos fibers. When left intact and undisturbed these materials do not pose a health risk to building occupants. If disturbed and inhaled in sufficient quantity, asbestos fibers may cause cancer and lung disease.

- At U of L the Department of Environmental Health and Safety (DEHS) provides asbestos management and abatement services. Before disturbing any suspect building materials contact DEHS for asbestos testing.
- **Lead Based Paint** – Lead-based paint (LBP) may be present on surfaces in pre-1978 buildings. Although LBP chips can be a hazard to young children who eat the chips, the primary concern for adult exposure is fine dust, where inhalation or accidental ingestion of lead dust in sufficient quantity can affect the blood or nervous system. Avoid disturbance of LBP that creates a fine dust (power sanding, saw cutting, etc.). If renovation of a painted surface may create fine dusts, contact DEHS for LBP testing.
- **Silica** – Many building materials contain silica sand – cement, concrete, brick, mortar, etc. While sand particles themselves are not a hazard, very fine dusts of crystalline silica may cause lung disease. Although drilling a few holes does not create a significant hazard, extensive use of power tools on these materials must include dust control measures. In addition, there should be no dry sweeping of residual dusts and only vacuums cleaners with high efficiency filters may be used.

## Training

Each employee who works with, or is potentially exposed to hazardous chemicals will receive initial and periodic training on the Hazard Communication Standard and the safe use of those hazardous chemicals.

The employee's supervisor or designee is responsible for ensuring that each employee receives the appropriate Hazard Communication training, including both general and unit-specific training and must maintain documentation of all training.

### General Haz Com Training

DEHS will provide General Hazard Communication training for UofL employees, which will include the following topics:

- A summary and explanation of the OSHA Hazard Communication Standard
- An explanation of the UofL Hazard Communication Plan, and its location and availability
- The chemical and physical properties of hazardous materials (e.g. flash point, vapor pressure, reactivity) and the methods that can be used to detect the presence or release of chemicals
- The physical hazards of chemicals (e.g. potential for fire, explosion)
- The health hazards of chemicals

- Methods and observations to detect the presence or release of hazardous chemicals, such as monitoring conducted by U of L DEHS, continuous monitoring devices, visual appearance or odor, etc.
- The procedures to protect against chemical hazards (e.g. engineering controls, such as ventilation; work practices, such as hand washing; personal protective equipment such as gloves; and emergency procedures)
- Pre-planning for non-routine tasks, spills and emergencies
- The importance of MSDSs, accessibility and how to read and interpret the information on MSDSs and labels

### **Unit-Specific Training**

The supervisor must ensure all employees, those they supervise, as well as other employees working in the area under their supervision (i.e. employee from another department), are provided with the current hazard information for the chemicals that may be encountered.

The supervisor or the designee will conduct the unit- specific training focusing on the specific chemical hazards that employees may encounter. This training will be provided either before or at the time the employee is assigned to work with a hazardous chemical. Additional training shall be provided for employees whenever a new hazard is introduced into the work area. Unit-Specific training will include at a minimum:

- A review of the written unit-specific Hazard Communication Plan
- Location & accessibility of the MSDSs, chemical inventory and written plans
- Details of the departments labeling system
- Hazards of the specific materials to which employees may be exposed
- Protective measures to reduce exposure including
  - PPE for use with hazardous chemicals (specific type, location, use, and maintenance)
  - Work practices
  - Location of Safety Showers/Eye Wash stations
- Explanation of routine and non-routine tasks involving encounters with hazards chemicals
- Emergency procedures involving hazardous materials

An assortment of videotapes on specialized health and safety topics is available to supervisors to supplement unit-specific training. Please contact DEHS by calling 852-6670 for available training videos.

The [Employee Training Form](#) is used to document when each employee is trained as well as the content of the training. These are important compliance records and must be maintained by the supervisor or designee for the duration of employment of each individual receiving the training.

DEHS will periodically review the training program to ensure the material is current and appropriate for the existing conditions.

## Recordkeeping

The Department must develop a plan to ensure the continuity of all recordkeeping when a supervisor leaves or is reassigned.

**Training records:** Records of General and Unit Specific Haz Com training must be maintained by the supervisor and be readily available for inspection by DEHS or OSHA representatives. (See Appendix for Employee Training Record form)

**MSDS:** The supervisor is responsible for the MSDSs for hazardous material currently used in the work place, which must be maintained and updated as described in this Hazard Communication Program, and must be retained for 30 years (per the Access to Employee Exposure and Medical Records Standard 29 CFR 1910.1020). The 30-year retention is not required if the Chemical Inventory includes where and when the chemicals were used (CPL 02-02-038 Inspection Procedures for the Hazard Communication Standard).

**Chemical Inventory:** The Supervisor will ensure a list of hazardous material is current and accurately maintained. Each calendar year the supervisor will sign and date a copy thus confirming the accuracy of the information on the Chemical Inventory. A signed copy will be provided to DEHS upon request. A file of these annual chemical inventories will be maintained by the supervisor for 30 years.

## Appendices – Supporting Documents and Forms

Appendix A: [The OSHA Hazard Communication Standard](#)

Appendix B: [Definitions](#)

Appendix C: [Template for Unit-specific HazCom Plan](#)

Appendix D: [Chemical Inventory form](#)

Appendix E: [Employee Training Record form](#)