UNIVERSITY OF
NORTHERN COLORADO

Environmental Health and Safety

HAZARD COMMUNICATION PROGRAM

September 2024

UNIVERSITY OF
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Hazard Communication Program

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Hazard Communication Program

I. Purpose and Scope

University of Northern Colorado's (UNC) Hazard Communication Program (HAZCOM) has been developed to comply with the Occupational Safety and Health Administration (OSHA), 29CFR 1910.1200 Hazard Communication Standard. UNC's program requires that all university personnel have the *right-to-know* information about the properties and the *right-to*-understand potential physical and health hazards of chemicals that they may be potentially exposed to in the course of their employment or study.

Individuals engaged in laboratory use of hazardous chemicals in a laboratory should also refer to the Chemical Hygiene Plan.

The principles behind the Hazard Communication Program are that all employees have the *right-to-know* the hazards of the chemicals they use or that are present in their work area and the *right-to-understand* how to protect themselves. Complying with the requirements of Hazard Communication and ensuring employees are informed about the hazards of the chemicals involves three basic steps:

- Identifying, inventorying, and labeling all hazardous chemicals used
- Obtaining and providing access to Safety Data Sheets (SDS)
- Training employees about the hazards of the chemicals they use or are exposed to

II. Responsibilities

The following departments and personnel shall be responsible for implementing this program and its policies.

A. Environmental Health & Safety Department

The Environmental Health & Safety (EHS) Department shall act as the “program administrator” and shall be responsible for the following elements of the program:

- Develop, maintain, periodically review, update and manage the written Hazard Communication Program (HAZCOM).
- Provide guidance and technical assistance to departments regarding the program.
- Provide results of hazard analysis and monitoring reports upon request to affected employees.

B. Human Resources Department

The Human Resources (HR) Department shall assist and coordinate the following:

- Assist EHS in the coordination and administration of personnel that fall within the limits of the Hazard Communication Program.
- Coordinate and schedule hazardous chemical exposure examinations of personnel covered by the Hazard Communication Program.
- Manage and/or maintain medical exposure records.
- Provide affected personnel with follow-up medical examinations in accordance with the requirements of this program.

C. Deans, Directors, or Department Heads

Deans, Directors and Department Heads are responsible for:

- Hazard Communication Program compliance within their departments.
- Analyzing each job description relevant to identifying potential hazardous chemical exposure.

D. Supervisors and Faculty (Hazardous Communication Coordinators - each Department)

It is the responsibility of the supervisor or faculty member (department) of the work area that uses hazardous chemicals to:

- Assess the potential hazard(s) posed to their workers.
- Ensure all workers who use hazardous materials are properly trained.
- Train the employees regarding these hazards and guidelines.
- Supply the proper Personal Protective Equipment (PPE).
- Turn in appropriate records to the Human Resources department.

- Ensure that a system is established to make Safety Data Sheets (SDS) readily available to employees.
- Assign a Hazardous Communications Coordinator.

Department lab coordinators or assigned individuals as Hazardous Communications Coordinators shall ensure the following:

- Ensure an inventory (Chemical or Biological) list is maintained and updated periodically.
- Identify all hazardous, chemical and biological products used, acquired or maintained by staff.
- Maintain SDS files.
- Ensure hazardous chemicals are labeled.
- Ensure that a system is established for accessing SDS's during emergencies.
- Conduct appropriate training.

E. UNC Employees

UNC Employees shall comply with the following information:

- Become familiar with the requirements of the Hazard Communication Program prior to performing activities covered by the program.
- Abide by the requirements established by the program and apply safety and health precautions specified by the university.
- Report any issues of concern which could compromise health and safety to their immediate supervisor.
- Utilize proper personal protective equipment (PPE).
- Attend annual basic safety training and area-specific training as required under the UNC Hazard Communication Program and any department-specific training.

F. Contractors

UNC employees who oversee outside services personnel (i.e. contractors) are responsible for ensuring that the contractor is provided with the following information:

- Provide the contractor with information about the University Hazard Communication Program.
- Provide information about any known hazardous chemicals or materials they may encounter.
- Provide information, i.e. (SDS), on any precautions for their employees to follow.

UNC employees who oversee outside servicing personnel (i.e. contractors) are responsible for ensuring that the contractor provides the University with the following information:

- The contractor shall provide a specific location for SDS's of hazardous materials to be used on campus.
- The contractor SDS's must be accessible to occupants and UNC staff.
- The contractor is responsible for training his/her employees in all aspects of the UNC Hazard Communication Program (or comparable program) including all hazardous chemicals and materials that they may be exposed to while working at the University.
- Outside services must follow all labeling procedures (See Section IV).
- The contractor shall provide an SDS and any other potential hazardous information regarding hazardous chemicals that will be used in a University building and provide a specific location for SDS.

III. Hazard Identification and Evaluation

The Hazard Communication Program requirements are applicable to chemicals and materials utilized in the work area if they present a physical or health hazard. All chemicals utilized in the work area must be evaluated to determine whether they present a physical or health hazard.

The manufacturer issued Safety Data Sheet (SDS), is the proper document to consult when evaluating a chemical's properties. EHS is available to assist with questions regarding the hazards of chemicals.

A chemical with a physical hazard means that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, unstable (reactive), water reactive or other physical hazards. A chemical with a health hazard means a chemical in which statistically significant evidence indicates acute or chronic health effects may occur in exposed employees.

A. Chemical Inventory

The University and regulatory standards require that a list of chemicals in the workplace be maintained as part of this program. The list serves as an inventory of Safety Data Sheets that must be maintained. Each department shall establish a procedure or process for ensuring that new chemicals are promptly and accurately added to the chemical inventory list

B. Safety Data Sheets

Safety Data Sheets (SDS) are the most convenient and widely accepted method for communicating the hazards of a chemical to an employee. An SDS is a printed 16 section formatted description of the chemical's properties,

precautionary steps and first aid measures; produced by the manufacturer of the chemical. These documents provide the supervisor and employees with the necessary information to use chemicals safely and to respond to with chemical spills and releases. Format for the SDS must contain the following data:

1. Product Identification
2. Hazard Identifications
3. Composition
4. First Aid Measures
5. Fire Fighting Measures
6. Accidental Release Measures
7. Handling and Storage
8. Exposure Control, PPE and Exposure Limits
9. Chemical and Physical Properties
10. Stability and Reactivity
11. Toxicology Information
12. Ecological Information
13. Disposal Considerations
14. Transportation
15. Regulatory Information
16. Other

Each department must maintain a file of SDS for chemicals used within their area. The supervisor must ensure that the SDS file is accessible to all employees during work hours.

- For products currently in use, SDS must be obtained immediately.
- For new products the SDS must be obtained, and appropriate training provided prior to the use of the product by any employee. It is the supervisor's responsibility to ensure this training is conducted.

It is essential that work areas establish procedures for acquiring the SDS as well as training the employee(s) in the hazards of a new product prior to its use. Each department must have procedures in place to control the selection and purchase of materials, and the acquisition and distribution of the SDS's prior to employee usage of the product.

IV. Labeling

All hazardous chemicals and materials used in the workplace must be labeled properly. Hazardous chemicals and materials that are shipped in and used in their original container are often labeled by the manufacturer or distributor.

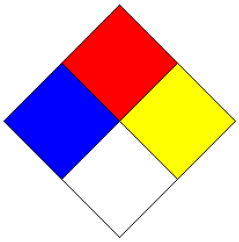
Hazardous materials and chemicals which are placed into secondary containers for distribution and use around the workplace must meet various labeling requirements. Specifically, the label on all of secondary containers must state:

- The identity of the product or the ingredients of a mixture that will allow SDSs to be obtained when needed
- Information regarding the hazards of the chemical or material that includes: Health hazard; Reactivity hazard; Fire hazard; and, Required Personal Protective Equipment (PPE)
- Any other necessary physical or health hazards not covered above

The Hazardous Material Information System (HMIS) label shall be used for all secondary containers. It is presented below. Other labeling systems, such as NFPA, may be used provided that employees are properly trained in their use.

HMIS Label

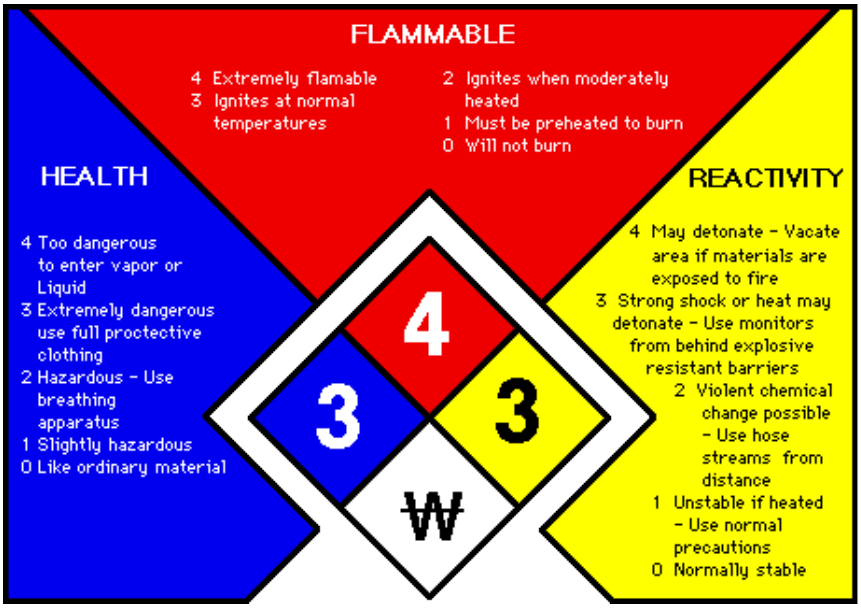
NFPA Chemical Hazard Label



Each of the colored areas has a box in which the degree of hazard can be written. The degree of hazard is given by these numbers:

4 – Extreme
3 – Serious
2 – Moderate
1 – Slight
0 – Minimal

A definition of each degree of hazard category is listed below:



The NFPA Chemical Hazard label white diamond provides special symbols that may include:

W .....Water Reactive **Ox** .....Oxidizing Agent

.....Radioactive .....Poison

The HMIS label, Protective Equipment (white section), may include the following:

HMIS Letter	Required Protective Equipment
A	Safety Glasses
B	Safety Glasses, Gloves
C	Safety Glasses, Gloves, Protective Apron
D	Face Shield, Gloves, Protective Apron
E	Safety Glasses, Gloves, Dust Respirator
F	Safety Glasses, Gloves, Protective Apron, Dust Respirator
G	Safety Glasses, Gloves, Vapor Respirator
H	Splash Goggles, Gloves, Protective Apron, Vapor Respirator
I	Safety Glasses, Gloves, Dust and Vapor Respirator
J	Splash Goggles, Gloves, Protective Apron, Dust and Vapor Respirator
K	Air Line Mask or Hood, Gloves, Full Suit, Boots
L – Z	Site-specific label. Ask supervisor for handling instructions

Global Harmonization

This new implementation was devised to provide labeling elements called “pictograms”, that would be universal for all employees worldwide. These classification pictures will now be on all primary labels of chemicals coming from a manufacturer. These pictograms can be used singular or in unison with one another.

HCS Pictograms and Hazards

Health Hazard 	**Flame** 	**Exclamation Mark** 
• Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	• Flammables • Pyrophoric • Self-Heating • Emits Flammable Gas • Self-Reactive • Organic Peroxides	• Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity • Narcotic Effects • Respiratory Irritant • Hazardous to Ozone
Gas Cylinder 	**Corrosion** 	**Exploding Bomb** 
• Gases under Pressure	• Skin Corrosion/ burns • Eye Damage • Corrosive to Metals	• Explosives • Self-Reactive • Organic Peroxides
Flame over Circle 	**Environment** 	**Skull and Crossbones** 
• Oxidizers	• Aquatic Toxicity	• Acute Toxicity

V. Food or Beverage Where Chemical are Used

Hazardous chemicals shall be separated from eating and drinking areas, in order to prevent possible ingestion of chemicals. No employee, student or visitor shall be allowed to consume or store food or beverages in any area exposed to hazardous chemicals.

Additionally, no food or beverage will be stored in a refrigerator or freezer where chemicals, biohazards, radioactive or other hazardous processes are stored. Food or beverages must not be placed in a microwave oven or other heating device that is used to conduct hazardous processes.

Refrigerators, freezers and microwaves used for the storage or processing of hazardous, toxic, biohazard or radioactive products shall be labeled with wording that positively identifies that the equipment's use is restricted. Words such as "CHEMICAL STORAGE ONLY" or "CHEMICAL PROCESSING ONLY," are appropriate. Food containers are not appropriate for the storage of hazardous materials or chemicals.

VI. Employee Awareness, Training, Releases and Recordkeeping

A. Employee Awareness

Each work area will train their employees on the specific hazardous materials or chemicals in their departmental work area. Refresher training shall be conducted annually. Training records must be maintained. EHS can assist with training needs and requirements for departments. The training requirements for the Hazard Communication Program include the following:

- At the time of initial assignment or when new tasks are assigned for which training has not been received.
- When a new hazardous chemical is introduced into the workplace.

B. Training Requirements

Training is expected to include, but may not be limited to:

- Information and training may be designed to cover categories of hazards (i.e., flammability, toxicity, carcinogenicity) or specific chemicals.
- Describe the location and availability of the chemical inventory list (within the department), location of SDS, and the location of the University's Hazard Communication Program.
- Explain the purpose and contents of Safety Data Sheets. An employee must be able to understand an SDS and obtain hazard, handling, and exposure control information from an SDS.

- Explain the labeling system utilized by the department and how employees can obtain and use appropriate information.
- Review the methods and observations that can be used to detect the presence of hazardous chemicals, such as odor, appearance and monitoring/instrumentation.
- Assess the hazards of the chemicals or materials used and review that assessment with employees. This review must include describing protective measures for minimizing exposure such as appropriate work practices, personal protective equipment, and emergency procedures.
- Review handling, storage and spill procedures.
- Review emergency response procedures.

C. Non-Routine Tasks, Spills or Releases

Tasks may periodically be performed which may potentially expose employees to hazardous chemicals not normally used in their regular work duties. Examples of non-routine tasks performed may include: repairs, spill cleanup, and servicing of equipment. Prior to starting work on such projects, affected personnel shall be presented information by their supervisor about hazards to which they may be exposed during the task.

This training must include the same level of detail and information necessary for routinely used hazardous chemicals. The training must emphasize that the potential hazard of working with unfamiliar material can be greater than with those that are handled routinely.

D. Recordkeeping

Employee training records will be retained within each department. The Hazard Communication Training form (see Appendix A) may be used for training and recordkeeping. Training records shall be retained for a minimum of seven years.

The medical exposure record for each employee must be maintained in the Human Resources department and must be retained for thirty years.

VII. Hazardous Waste Disposal

Chemicals or materials that are outdated, expired, or no longer used must be evaluated prior to disposal to determine if it is considered a hazardous waste. EHS can assist in the determination if a material is a hazardous waste.

Chemicals and materials that are a hazardous waste must be disposed of properly. For guidance on the proper procedure to follow, refer to the University's Hazardous Materials Management Plan.

VIII. Emergency Information

In case of a spill or release immediately contact UNC Police Department (UNCPD) at 351-2245. UNCPD will then determine the next steps to take.
The University Hazardous Materials Incidents Emergency Response Plan is maintained by the EHS department. This plan supports spill response and emergency situations related to the Hazard Communication Program.

UNIVERSITY OF NORTHERN COLORADO
HAZARD COMMUNICATION TRAINING FORM

Hazard Communication Program and General Chemical Safety	**Supervisor's Notes:**
☐ Review copy of written UNC Hazard Communication Program (available on the EHS website).	*Review the UNC Hazard Communication Program: http://www.unco.edu/facility/EHS/procedures.html*
☐ No eating or drinking where chemicals are stored or utilized.	*Ask employees if they ever eat while using chemicals? Ensure that employees have a location to eat and drink that is free of hazardous chemicals.*
☐ Chemical storage: flammables in proper cabinets, chemicals stored by compatibility.	*Review your work area's procedures and practices utilized to ensure that chemicals are properly stored. Included review on compatibilities of chemicals.*

Inventory,-Safety Data Sheets (SDS), and Labeling	
☐ Identify the work area's current chemical inventory and review the chemicals that the employee may use or be exposed to, prior to use.	*Ask employees if they know of other locations in the work area where hazardous chemicals are used?*
☐ Identify the location of SDS. Familiarize employees on how to read and use the information contained in the work place SDS.	*Have employee obtain an SDS for a chemical they use or provide one for a chemical that will be used.*
☐ Review one or more of your workplace SDS': ☐ The identity of the chemical ☐ Ingredients and their hazards ☐ Manufacturer ☐ Physical and Chemical Characteristics ☐ Physical hazards and related safe work practices ☐ Reactivity hazards and related safe work practices ☐ Health hazards ☐ Signs and symptoms of overexposure ☐ Routes the chemical enters into the body ☐ Required ventilation ☐ Proper Protective Equipment (PPE); Clothing and Equipment ☐ Proper storage and handling ☐ Procedures and equipment for spills and releases ☐ Disposal methods	*Ensure that the employee can locate and understands the information on a selected SDS.* • *Why is it hazardous? Is it Toxic? Flammable? Corrosive? Other?* • *How do they determine the hazard?* • *How would they know if they were exposed to the chemical?* • *How does the chemical enter the body? Inhalation? Ingestion? Absorption?* • *What are the symptoms of overexposure to the chemical? Unique odor? Dizziness? Other?* • *What engineered controls are required, if any? Vapor/fume hood? Glove Box?* • *What personal protective equipment (PPE) is required?* • *What should the employee do if the hazardous chemical is spilled?*
☐ Familiarize the employee with reading and using information on container labels. Discuss the importance of existing labels and ensuring that chemicals transferred to secondary containers are properly labeled: ☐ Complete and legible ☐ Contains chemical name and ingredients ☐ Identifies chemical and physical hazards (HMIS or NFPA Ratings)	• *Ensure that the employee can read and understand a chemical warning label, and can properly label a secondary container of a chemical.* • *Show employees labels that are to be used for secondary containers.* • *Fill out a sample secondary label for the hazardous chemical from the above MSDS.*

Hazards of Chemicals, Detection/Presence of Chemicals, and Personal Protective Equipment (PPE)	
☐ Identify and discuss the various hazards of chemicals and hazard categories that an employee may encounter in the work area (flammables, corrosives, toxics/poisons, etc.).	*What are the hazards of the various hazard categories? Discuss the safety considerations of each category. Discuss proper storage and handling.*
☐ Using or introducing new or non-routine chemicals into the work area requires approval.	*Discuss that employees are required to get authorization before using or introducing chemicals into the work area.*
☐ Discuss methods and observations for detecting the presence of chemicals and/or bodily responses to the presence of chemicals as noted in SDS sheets or other technical information.	*How does the chemical enter the body? Inhalation? Ingestion? Skin absorption? What are the effects? Dizziness? Skin redness/irritation? Burning in eyes/nasal passages?*
☐ Exposure control methods. ☐ Exposure monitoring/records. ☐ Discuss methods for the safe handling and use of chemicals: ☐ Engineering Controls (e.g., fume hoods, spray booths) ☐ Safe working practices, precautions and additional training ☐ Proper Personal Protective Equipment (PPE) is available and employees are trained in the proper use of the PPE (gloves, eye protection, etc.)	• *How is exposure to a chemical controlled?* • *What methods are used for particular chemicals? Vapor/Fume hoods? Spray booths?* • *What procedures are in place to minimize exposure? Designated working areas?* • *What personal protective equipment (PPE) is utilized to minimize exposure?* • *Does the employee know where the PPE can be obtained and how to properly utilize the PPE?*
	Does the use of the chemical require exposure monitoring to ensure the employee is not overexposed over a period of time (chronic exposure)? What records will be kept?

Disposal	
☐ Waste disposal procedures.	*Which employees will be trained in waste disposal procedures?*

Emergency Procedures

☐ Eyewash / safety showers (other water source). Discuss location(s) and use.
☐ Spill Procedures
☐ Review Emergency Response Plan (ERP) with employee.

Name of Employee (Printed):	Signature:	Date:
Name of Supervisor (Printed):	Signature:	Date:

Original – Personnel File; Copy – Supervisor