



Chemical Safety

Hazard Communication (Workplace Chemical Safety)

[1910.1200 – Hazard Communication Program](#)

I. Introduction:

An increased awareness of hazards associated with workplace chemicals has been reflected in legislation designed to inform and train employees in the use of hazardous materials. The Hazard Communication Standard, an OSHA regulation (29 CFR 1910.1200), places specific responsibilities on employers to inform employees about the hazards of chemicals with which they work. The standard was first issued in 1983 and targeted the manufacturing sector; however, in 1987, it was expanded to cover all employers engaged in the handling and use of hazardous materials. March 26, 2012 the Hazard Communication Standard was changed to include changes due to Globally Harmonized System, GHS. Over the years it has become known as the "Worker's Right-To-Know" legislation. The Federal OSHA Act provides for states to develop their own occupational safety and health regulations, which meet or exceed the federal program. The Wyoming Occupational Health and Safety Rules and Regulations include the Hazard Communication Standard. The University of Wyoming (UW) is mandated to comply with this statute.

II. Purpose:

The purpose of this written Hazard Communication Program (Workplace Chemical Safety) at the University of Wyoming is to ensure that:

- A. Hazardous substances present in the work place are properly identified and labeled.
- B. Employees have access to information on the hazards of these substances.
- C. Employees are provided with information on how to prevent injuries or illnesses due to exposure to these substances.
- D. Deans, directors, department chairs and/or managers have the responsibility for maintaining the Safety Data Sheets, SDSs, conduct any specific training, etc.



- E. Chemical Safety Specialist has the responsibility for maintaining the University of Wyoming program, conduct training, etc.

III. Scope:

All laboratory "Employees (workers)": faculty, staff, post-docs, graduate students and undergraduate students are expected to work in a safe manner, implementing the information in this program.

- A. "Employee (worker)" is any person receiving a University of Wyoming paycheck, independent of the source of funds. This program covers all university employees working in or out of a laboratory setting who might be exposed to hazardous chemicals in the course of their assignments.
- B. The general concepts of the Chemical Hygiene Program should be extended to students not employed by the University in teaching laboratories and other structured teaching situations. However, the specific requirements as addressed to employees may not be applicable or practical in some cases. In particular, the requirements called for in Section V. Medical Consultation and Exams; Section VII. Training; and Section IX. Air Monitoring; will be addressed for these students in detail in the Student Safety Program and department policies.
- C. Employees of outside agencies using University of Wyoming laboratory facilities who might be exposed to hazardous chemicals in a laboratory are covered by the requirements of this standard. Outside agencies utilizing University of Wyoming laboratory facilities may develop their own chemical hygiene program and it must cover the areas described by 29 CFR 1910.1450.
- D. **Laboratory** means a facility where the "laboratory use of hazardous chemicals" occurs. It is a workplace where relatively small quantities of hazardous chemicals are used on a non-production basis. Laboratories may include:
 - 1. Research laboratories
 - 2. Teaching laboratories
 - 3. University research stations
 - 4. University agricultural and livestock farms

III. Authority and Reference:

Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1200



IV. Definitions:

Chemical means any element, chemical compound or mixture of elements and/or compounds.

Chemical Name means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) of the Chemical Abstracts Service (CAS) rules of nomenclature or a name that clearly identifies the chemical for the purpose of conducting a hazard evaluation.

Common Name means a designation of identification, such as a code name, code number, trade name, or generic name, used to identify a chemical other than by its chemical name.

Employee means a person who is on the payroll of University of Wyoming (fulltime benefited, part-time benefited and non-benefited part-time – possibly students) and who may be or may have been exposed to hazardous chemicals in the person's workplace under normal operating conditions or foreseeable emergencies.

Expose or Exposure means that an employee is subjected to a hazardous chemical in the course of employment through any route of entry, including inhalation, ingestion, skin contact, or absorption. The term includes potential, possible, or accidental exposure under normal conditions of use or in a reasonably foreseeable emergency.

Hazardous Chemical Means any element, compound or mixture of elements or compounds that is a physical or health hazard. Relatively innocuous materials such as NaCl, sugars, enzymes, etc. are exempt. A hazard determination may be made by employers who choose not to rely on the evaluations made by their suppliers if there are relevant qualitative or quantitative differences. A hazard determination shall involve best professional judgment: factors such as quantity, concentration, physical properties (i.e., volatility) and use may be considered.

Hazard Warning means any words, pictures, symbols or combination thereof appearing on a label or other appropriate form of chemical(s) in the container(s).

Health Hazard includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, and neurotoxins, agents which act on the hematopoietic system and agents which damage the lungs, skin, eyes or mucous membranes.



Label means any written, printed or graphic material displayed on or affixed to containers of hazardous chemicals.

Laboratory means any research, analytical, or clinical facility equipped for experimentation, observation, or practice in a science or for testing and analysis.

Safety Data Sheet (SDS) means written or printed material concerning a hazardous chemical which is prepared according to established guidelines.

Name the same as is on the label, the SDS and inventory list.

Personal Protective Equipment includes appropriate clothing (e.g. no shorts, skirts or sandals) or devices intended to prevent exposure to hazardous chemicals (e.g., respirator, gloves, lab coat).

Physical Hazard means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, and oxidizer, pyrophoric, unstable (reactive) or water reactive.

Primary Container means the container in which the chemical arrives from the manufacturer.

Readily Available means access during an individual's work shift.

Secondary container means a container in which the chemical has been placed by the worker for use.

Unit is considered to be a Research Laboratory and/or Research Station, an Extension Center, shops or other individual site(s).

Work Area is considered to be a location of one or more rooms of common use (e.g., a laboratory or a shop).

Workplace is an establishment at one geographical location containing one or more work areas.

V. Hazard Determination:

A. A "hazardous substance" is a physical or health hazard that is listed as such in either:

1. 29 CFR Part 1910, Subpart Z, *Toxic and Hazardous Substances*, Occupational Safety and Health Administration.



2. *Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment* (latest edition), American Conference of Governmental Industrial Hygienists (ACGIH).
- B. A "hazardous substance" is regarded as a carcinogen or potential carcinogen if it is identified as such by:
1. National Toxicology Program (NTP), *Annual Report on Carcinogens* (latest edition).
 2. International Agency for Research on Cancer (IARC) *Monographs*.
 3. 29 CFR Part 1910, Subpart Z, *Toxic and Hazardous Substances*, Occupational Safety and Health Administration.
- C. Manufacturers, importers and distributors will be relied upon to perform the appropriate hazard determination for the substances they produce or sell.
- D. The following materials are **not** covered by the Hazard Communication Standard:
1. Any hazardous waste as defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 USC 6901 et seq.) when subject to regulations issued under that act by the Environmental Protection Agency.
 2. Tobacco or tobacco products.
 3. Wood or wood products. **NOTE:** Wood dust is **not exempt** since the hazards of wood dust are not "self-evident" as are the hazards of wood or wood products.
 4. Any consumer product or hazardous substance if the product is used in the workplace in the same manner as normal consumer use and if the use results in a duration and frequency of exposure that is not greater than exposures experienced by consumers;
 5. Any article that is formed to a specific shape or design during manufacture, that has end-use functions dependent in whole or in part of its shape or design during end use, and that does not release or otherwise result in exposure to a hazardous chemical under normal conditions of use (e.g., tires, PVC piping);
 6. Foods, drugs, or cosmetics intended for personal consumption by employees while in the work place.



7. Foods, drugs, cosmetics, or alcoholic beverages in retail stores packaged for retail sale.
8. Any drug, as defined in the Federal Food, Drug, and Cosmetic Act,
9. Radioactive waste;
10. A hazardous chemical in a sealed and labeled package that is received and subsequently sold or transferred in that package if:
 - a. the seal and label remain intact while in the workplace;
 - b. the chemical does not remain in the workplace more than five working days;
 - c. personnel training requirements are met;

VI. Application:

This program applies to the use of 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.

VII. Responsibility for Compliance:

Environmental Health and Safety (EHS) Chemical Safety Specialist is responsible for reviewing and overseeing the implementation of the Hazard Communication Program (Workplace Chemical Safety). This includes coordinating the compliance effort for UW, acting as a consultant to UW departments regarding implementation and enforcement, evaluating work practices and personal protective equipment, providing program materials to departments, tracking employee training, and ensuring medical monitoring.

Deans, directors, department chairs and/or managers are ultimately responsible for ensuring individual departments are in compliance with the program, as necessary.

Supervisors and section managers are responsible for ensuring that all requirements and procedures outlined in the Hazard Communication Program (Workplace Chemical Safety) are appropriate to the individual work areas under their supervision and are carried out properly.

Employees are responsible for following all safe work practices and using proper precautions required by the guidelines in this program.



Each work area shall have a designated person (responsible party) who is responsible for:

- 1) Ensuring that the Hazard Communication Program (Workplace Chemical Safety) is followed in that work area,
- 2) Updating the chemical inventory,
- 3) Providing additional specific training, and
- 4) Making sure those SDSs are available for all chemicals covered by the program during employees normal work hours.

Contractors who work in areas in which no UW personnel are currently employed, e.g. construction of new facilities and/or renovation of cleaned and evacuated areas, shall provide their own Hazard Communication Program for their employees. Contractors who work in an area in which chemicals are used shall be provided with a list of chemicals in use in that area, access to SDS for those chemicals, a copy of the UW Hazard Communication Program, and training specific to the chemicals to which they may be exposed. Contractors that use chemicals in areas where UW personnel may be exposed shall provide a copy of their Hazard Communication Program along with copies of the SDS for chemicals used on that project to the UW project manager.

VIII. HAZARDOUS SUBSTANCE INVENTORY

- A. Deans, directors, department chairs and/or managers and/or their designated representative are responsible for compiling, maintaining, and updating, when necessary, a master list of hazardous substances used or produced in the facility. The inventory list will include the common identity or trade name of the product and the name and address of the manufacturer. Hazardous substances will be listed alphabetically by material or manufacturer. Substances which are not in containers will also be included on the inventory list, e.g., welding fumes, carbon monoxide from a fork lift, etc.

IX. LABELING

- A. Deans, directors, department chairs and/or managers and/or their designated representative is responsible for evaluating labels on incoming containers. Each label must contain the following information:
 1. Identity of the substance.
 2. Appropriate hazard warning.
 3. Name and address of the manufacturer.



- B. If the label is not appropriate, deans, directors, department chairs and/or managers and/or their designated representative will notify the manufacturer (or supplier) that the label is not adequate.

Deans, directors, department chairs and/or managers and/or their designated representative will send a second request to the manufacturer if the correct label is not received within 30 days.

Deans, directors, department chairs and/or managers and/or their designated representative is responsible for preparing an appropriate label if one is not supplied by the manufacturer within the second 30 days.

A container will not be released for use until an appropriate label is affixed to the container.

- C. Labels will be removed if they are incorrect. When the container is empty it may be used for other materials provided it is properly cleaned and re-labeled.
- D. Each department supervisor is responsible for ensuring that all containers used in his/her department are labeled properly and remain legible. Defacing labels or using them improperly is prohibited.
- E. Unlabeled portable containers, such as pails and buckets, should be used by one employee and emptied at the end of each shift. If the secondary containers are used by more than one employee and/or its contents are not emptied at the end of the shift, the department supervisor and/or employee is responsible for labeling the container with either a copy of the original label or with a generic label which has a space available for appropriate hazard warnings.
- F. Piping systems shall be painted at access points and every 10 feet where the piping is 8 feet or closer to employee contact.

1. Piping shall be painted as follows:

- a. (substance)(color)
- b. (e.g., oxygen) (e.g., green)

X. SAFETY DATA SHEETS

- A. SDSs will be available to the employees on all hazardous substances to which there is potential or actual exposure. Deans, directors, department chairs and/or managers and/or their designated representative are responsible for ensuring that SDS are available on all incoming products. A product will not be released for use until a completed SDS is on file.



If the SDS is not available, Deans, directors, department chairs and/or managers and/or their designated representative will notify the manufacturer that SDS is needed or use the EHS website to locate an electronic copy.

Deans, directors, department chairs and/or managers and/or their designated representative will send a second request to the manufacturer if the SDS is not received within 30 days.

- B. Deans, directors, department chairs and/or managers and/or their designated representative is responsible for the review of all incoming SDSs. If the SDS is not complete, it will be returned to the manufacturer with a request for the missing **information**.

Deans, directors, department chairs and/or managers and/or their designated representative will send a second request for the missing information if a complete SDS is not received within 30 days.

- C. Deans, directors, department chairs and/or managers and/or their designated representative will request an SDS on the purchase of all products.
- D. Deans, directors, department chairs and/or managers and/or their designated representative is responsible for compiling and updating the master SDS file.
- E. Employees will have access to these SDSs during all work shifts. Copies will be made available upon request to Deans, directors, department chairs and/or managers and/or their designated representative.
- F. Deans, directors, department chairs and/or managers and/or their designated representative is responsible for updating the data sheets to include new information as it is received. A notice will be posted to inform employees that revised information has been received.
- G. All outdated SDSs will be archived for 30 years in their department files.

XI. EMPLOYEE TRAINING

- A. Prior to starting work with hazardous substances, each employee will attend a Hazard Communication (Workplace Chemical Safety) Training Session provided by UW-EHS Department, where they will receive information on the following topics:



1. Policies and procedures related to the Hazard Communication Standard.
 2. Location of the written Hazard Communication Program.
 3. How to read and interpret an SDS.
 4. Location of SDSs.
 5. Physical and health hazards of hazardous substances in their work area.
 6. Methods and observation techniques to determine the presence or release of hazardous chemicals.
 7. Work practices that may result in exposure.
 8. How to prevent or reduce exposure to hazardous substances.
 9. Personal protective equipment and appropriate work clothing.
 10. Procedures to follow if exposure occurs.
 11. Emergency response procedures for hazardous chemical spills.
- B. Upon attending the training program, each employee will sign a form or an electronic tracking system will be utilized documenting that he/she has received the training.
- C. Deans, directors, department chairs and/or managers and/or their designated representative are responsible for identifying and listing any non-routine hazardous task performed at this facility. Deans, directors, department chairs and/or managers and/or their designated representative will conduct training on the specific hazards of the job and the appropriate personal protective equipment and safety precautions and procedures.
- D. When a new substance is added to the inventory list, Deans, directors, department chairs and/or managers and/or their designated representative is responsible for reviewing the SDS for potential health effects. If the product presents a new health hazard (causes health effects unlike those covered in the training session), the Deans, directors, department chairs and/or managers and/or their designated representative is responsible for notifying all affected employees about the new health effects which result from exposure to the new substance.



A copy of the new Material Safety Data Sheet (SDS) will be posted by Deans, directors, department chairs and/or managers and/or their designated representative for 30 days. The new Material Safety Data Sheet will be placed above or near the SDS information binder. Each affected employee must read the SDS.

XII. INFORMATION TO CONTRACTORS

Outside Contractors/Cooperatives*:

- A. Outside contractors/cooperatives must be informed of the hazardous materials to which their employees may be exposed while performing their work. When requesting maintenance services from the Facilities Engineering Physical Plant, Facilities Planning, Real Estate, Telecommunications, or Athletics, those entities shall be informed of any hazards or potential hazards that might be encountered. Should any modifications to the buildings or their systems be requested by any UW Department, the request must be made through the Facilities Engineering Physical Plant, Facilities Planning, Real Estate, Telecommunications, or Athletics, and that request must be accompanied by a statement of hazards or potential hazards that may be encountered.
- B. Facilities Engineering Physical Plant, Facilities Planning, Real Estate, Telecommunications, or Athletics, are also required to inform occupants of the facility who might be exposed of any potential hazards that may be introduced by their personnel or by outside contractors during their work.

* "Cooperative," in this case, shall mean any other department or agency connected directly with internal University operations who may be performing work on University facilities; i.e. Facilities Engineering Physical Plant, Facilities Planning, Real Estate, Telecommunications, or Athletics.

XIII. PERSONNEL POLICIES

When an employee is not following safety and health rules regarding working with a hazardous substance, disciplinary action will be taken.

XIV. RECORD KEEPING

- A. All SDSs will be kept for a period of 30 years in a school/college or department file after the use of the substance has been discontinued.
EXCEPTION: If an employee exposure to a particular hazardous chemical occurs, the SDS for that product will become part of the employee's medical records. Medical records must be kept for **30** years.



Note: “Exposure” or “exposed” means that an employee is subjected to a toxic substance or harmful physical agent in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.), and includes past exposure, but does not include situations where the employer can demonstrate that the toxic substance or harmful physical agent is not used, handled, stored, generated, or present in the workplace in any manner different from typical non-occupational situations.

- *B. The master inventory list will also be kept for 30 years in a school/college or department file.

XV. COMMUNITY HAZARD COMMUNICATION

Chemical Safety Specialist is responsible for responding to requests from members of the community on hazardous substances used in any UW facility.

XVI. EMERGENCY RESPONSE PROCEDURES FOR HAZARDOUS CHEMICAL SPILLS

When a hazardous chemical spill occurs, follow these procedures:

- A. For small spills that you are trained to cleanup and have the correct response materials you may clean up the spill yourself.
- B. For a large spill (more than a gallon) you may call the Regulated Materials Management Center, RMMC – 766-3697.
- C. For a spill that creates an emergency (threat to persons or property):
 1. Move all employees away from spill to a safe environment.
 2. Call 911 or the designated emergency response number in your area to notify the necessary response team for the hazardous chemical spill.
 3. Retrieve the Hazard Communication Information, if possible.
 - a. Locate the SDS for the hazardous chemical which spilled.
 - b. If requested, provide the SDS to the Emergency Response Team.

Note: Do **not** try to contain the spill. The Emergency or Hazardous Material Response Team is trained to deal with hazardous chemical spills.



XVII. PROGRAM EVALUATION

Chemical Safety Specialist will conduct an evaluation of the University of Wyoming Hazard Communication program annually. The individual responsible for the items identified for improvement will be notified in writing. It is expected that action will be taken to correct the item within thirty working days.