

IOWA

Hazard Communication (HazCom) Program

Environmental Health and Safety
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1.0 Summary

The purpose of the Hazard Communication Program is to comply with the Federal OSHA's Globally Harmonized Chemical Hazard Communication Standard, 29 CFR 1910.1200 as amended on March 26, 2012 and as authorized by the Iowa Occupational Safety and Health Administration (IOSHA). Requirements consist of maintaining a list of hazardous chemicals, making Safety Data Sheets accessible, ensuring that containers are labeled, and providing the information, training, work practices, and equipment capable of protecting employees.

2.0 Scope

This program applies to work operations at The University of Iowa where employees may be exposed to hazardous chemicals under normal working conditions or during an emergency situation. Work areas typically include shops, utilities, operations and maintenance, custodial services, business services, residence services, athletics, and academic departments such as art and geology.

The following substances or situations are excluded from Hazard Communication:

- Chemical use in research laboratories.
- Biological hazards.
- Ionizing and non-ionizing radiation.
- Hazardous Waste as defined in the Solid Waste Disposal Act (RCRA).
- Hazardous Substances defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) when the hazardous substance is the focus of remedial or removal action conducted under CERCLA.
- Tobacco or tobacco products.
- Wood or wood products, including lumber which will not be processed, where the chemical manufacturer or importer can establish that the only hazard they pose to employees is the potential for flammability or combustibility (wood or wood products which have been treated with a hazardous chemical covered by this standard, and wood which may be subsequently sawed or cut, generating dust, are not exempted).
- Manufactured items (articles) which are formed to a specific shape of design during manufacture; have an end use that is contingent upon its shape or form as manufactured; do not release or in any way expose an employee to a hazardous chemical during normal use.
- Food or alcoholic beverages in a retail food establishment that are packaged for sale to consumers.

- Food intended for personal consumption by employees at the workplace.
- Any drug defined in the Federal Food, Drug and Cosmetic Act intended for personal consumption by employees in the workplace.
- Cosmetics, which are packaged for sale to consumers in a retail establishment, and cosmetics intended for personal consumption while in the workplace.

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.

3.0 Policy and Regulation

- University of Iowa Operations Manual, Part V Administrative, Financial, and Facilities Policies, [Chapter 43: Safety, Health, and Environment Policy](#)
- General Industry Occupational Safety and Health Regulations, 29 CFR 1910.1200, Hazard Communication.

4.0 Definitions

Chemical – any substance, or mixture of substances.

Container - means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical.

Employee - means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

Employer - means a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

Exposure or exposed - means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard and includes potential (e.g. accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption.)

Foreseeable emergency means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace or the environment.

Hazard category - means the division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard class - means the nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.

Hazard not otherwise classified (HNOC) - means an adverse physical or health effect identified through evaluation of scientific evidence during the classification process that

does not meet the specified criteria for the physical and health hazard classes addressed in the OSHA Standard.

Hazard statement - means a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Hazardous Chemical – any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

Health Hazard – a chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard

Immediate use - means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Label - means an appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.

Label elements - means the specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

Mixture - means a combination or a solution composed of two or more substances in which they do not react.

Personal Protective Equipment (PPE) – devices worn by workers to protect against hazards in the environment. Examples include safety glasses, gloves, and respirators.

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

Pictogram - means a composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical.

Precautionary statement - means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Product identifier - means the name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

Produce - means to manufacture, process, formulate, blend, extract, generate, emit, or repackage.

Pyrophoric gas - means a chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.

Responsible party - means someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

Safety data sheet (SDS) - means written or printed material concerning a hazardous chemical that is prepared in accordance with the OSHA Standard.

Signal word - means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for less severe hazards.

Simple asphyxiant - means a substance or mixture that displaces oxygen in the ambient atmosphere and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

Specific chemical identity - means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

Substance - means chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Use - means to package, handle, react, emit, extract, generate as a byproduct, or transfer.

Work area - means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

Workplace - means an establishment, job site, or project, at one geographical location containing one or more work areas.

6.0 Roles and Responsibilities

Deans, Directors and Department Heads are responsible to:

- Designate and empower the department Health and Safety Coordinator (or Program Coordinator or equivalent) and supervisors.
- Actively support these procedures within individual units.
- Ensure an environment where employees are encouraged to follow these procedures.
- Verify the EHS Advisor master chemical lists is updated every 60 days.
- Prepare a written plan and implement compliance procedures pursuant to the Hazard Communication Standard and update as necessary.

The Department Health and Safety Coordinator is responsible to:

- Act as an administrative liaison between the department and EHS.
- Provide administrative oversight of health and safety within the department.
- Facilitate the correction of safety problems within the department.

Supervisors are responsible to:

- Implement these procedures.
- Assure that staff is aware of this program and provided with training and the personal protective equipment prescribed on Safety Data Sheets.
- Implement a standard process for use of labels and warnings.
- Oversee the safe/compliant storage, use and disposal of hazardous substances.
- Develop effective Standard Work for Non-Routine Tasks in their departments and ensure the instructions are followed by their team of employees.
- Maintain documentation and records as required in these procedures.

Employees are responsible to:

- Comply with these procedures and any further safety requirements set by supervisors.

EHS is responsible to:

- Provide procedural guidelines, educational offerings, administrative consultations and reviews, and select technical and field services.
- Exercise surveillance over health and safety issues at the University.

7.0 Chemical List

A list of hazardous chemicals known to be present using a product identifier that is referenced on the appropriate safety data sheet must be compiled and updated every year, or more often when changes occur. Information on the list must include the chemical or product name, the work area where it was used, and identify the corresponding SDS. The list must be kept as a record for 30 years. (Ref: [1910.1020\(d\)\(1\)\(ii\)](#)).

The University of Iowa maintains an online chemical inventory system to facilitate federal and state regulatory reporting (ex. Department of Homeland Security; EPA Tier II, GHS, etc.). In addition, the system fulfills an agreement with local emergency response agencies, allowing them to access information regarding possible chemical hazards in cases of emergency. The online system that The University of Iowa uses is called EHS Assistant (EHSA).

Detailed information about this system and how to use it can be found on the Environmental Health and Safety (EHS) website at: <http://ehs.research.uiowa.edu/ehs-assistant-chemical-inventory-user-guide>.

8.0 Safety Data Sheets (SDS)

An SDS specific to the chemical or product must be available for each item on the chemical list that is present in the workplace. Employees must be provided reasonable access to SDSs. Electronic access is acceptable as long as the employee can get the information in a reasonable and timely manner.

OSHA considers the SDS to be an exposure record that must be kept for 30 years. However, if the chemical list is maintained according to the OSHA requirements, then each individual SDS does not have to be retained for 30 years.

9.0 Information for Emergency Responders

The chemical list and SDSs must be accessible to emergency responders. In the event the work area is evacuated, the information must be accessible from another location.

This information can be found on the EHS website at:

<http://ehs.research.uiowa.edu/ehs-assistant-chemical-inventory-user-guide>

10.0 Labels

All containers of hazardous chemicals must have a label or other indicator of contents and hazards.

- **Primary Containers - Must be Labeled**

Each container of hazardous chemicals in the workplace must be labeled, tagged or marked with the product identifier and words, pictures, symbols, or combination providing information regarding the hazards of the chemicals, and which, in conjunction with information immediately available to employees will provide specific information regarding the physical and health hazards of the hazardous chemical.

- **Secondary Containers - Must be Labeled**

Secondary containers must have labels provided by the manufacturer, or an alternate workplace label that includes the product identifier and words, pictures, symbols, or combination providing information regarding the hazards of the chemicals. Secondary containers are typically a smaller container that an employee fills from a larger container or a drum.

- **Containers for Use by One Person – Best Practice is to Use a Label**

A portable container that is filled from a labeled container, is for the employee's immediate use during that work shift and will be used by the same employee who filled the container, and will not be left unattended by that employee, is not required by the HazCom standard to have a label although using a label is recommended as **best practice**. If a container is left unattended or spills, e.g., during a weather emergency, label information helps emergency responders act safely and quickly.

Stationary Process Containers – Must Be Posted, Signed, or Labeled

Signs, placards, process sheets, batch tickets, operating procedures, or other written materials may be used in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it applies and conveys the same information as a label.

11.0 Information and Training

Training consists of general awareness training and site-specific training. Everyone who works with or is potentially exposed to hazardous chemicals will receive initial training

on the Hazard Communication standard and the safe use of those hazardous chemicals.

- General awareness training is available online through the Environmental Health & Safety Office.
- Site-specific information and training that is unique to the employee's workplace is provided by the department. This includes:
 - A summary of the workplace Hazard Communication Program includes an explanation of the labels received on shipped containers and the workplace labeling system used by their department; the safety data sheet, including the order of information and how employees can obtain and use the appropriate hazard information.
 - Methods or observations used to detect the presence or release of chemicals.
 - The physical, health, simple asphyxiation, combustible dust, and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in the work area
 - Procedures to protect against hazards.
 - Where SDSs are located and how to read and interpret information on them.

Additional training will be provided by the department if a new hazard is introduced into the workplace or if circumstances indicate that additional training is needed.

12.0 Non-Routine Tasks

When employees are required to perform hazardous non-routine tasks (e.g., cleaning tanks, entering confined spaces, cleaning chemical spills), training will be conducted to inform employees of the hazardous chemicals they may be exposed to and the proper precautions to take to control exposures.

13.0 Outside Contractors










The University unit or party hiring the contractor is responsible for the following requirements:

- When contractors are working for the University, they must be informed of any hazardous chemicals they may come into contact within the project area.
- The contractor, in turn, must inform the University of any Hazardous Chemicals they intend to bring in or use while on University property.
- Both parties must be aware of the necessary measures to be taken during normal operations and foreseeable emergencies.
- Both parties must have SDSs accessible for review for the duration of the project.

14.0 Employee Owned Chemicals

Employees may not bring hazardous chemicals to work.

15.0 GHS – Hazard Pictograms and Related Hazard Classes

GHS - Hazard Pictograms and Related Hazard Classes		
		
Explosion Bomb <ul style="list-style-type: none"> • Explosives • Self-reactives • Organic Peroxides 	Corrosion <ul style="list-style-type: none"> • Skin corrosion/burns • Eye damage • Corrosive to metals 	Flame Over Circle <ul style="list-style-type: none"> • Oxidizing gases • Oxidizing liquids • Oxidizing solids
		
Gas Cylinder <ul style="list-style-type: none"> • Gases under pressure 	Environment <ul style="list-style-type: none"> • Aquatic toxicity 	Skull & Crossbones <ul style="list-style-type: none"> • Acute toxicity (fatal or toxic)
		
Exclamation Mark <ul style="list-style-type: none"> • Irritant (eye & skin) • Skin sensitizer • Acute toxicity • Narcotic effects • Respiratory tract irritant • Hazardous to ozone layer (non-mandatory) 	Health Hazard <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive toxicity • Respiratory sensitizer • Target organ toxicity • Aspiration toxicity 	Flame <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-heating • Emits flammable gas • Self-reactives • Organic peroxides

16.0 Related Guidelines and Plans

- [Personal Protective Equipment \(PPE\)](#)
- [Respiratory Protection](#)

17.0 Resources and Assistance

EHS's website contains additional information on contacts for assistance, training offerings, and audit samples.