



OLD DOMINION
UNIVERSITY

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*Occupational Safety & Health ♦ Environmental Health ♦ Laboratory Safety ♦ Industrial
Hygiene ♦ Radiation Safety ♦ Hazardous Waste ♦ Pollution Prevention*

Hazard Communication Program (HAZCOM)

Administered by

Environmental Health and Safety Office

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Table of Contents

<u>Section</u>	<u>Page</u>
I. Responsibilities	1
II. Introduction	2
III. Hazardous Chemical Inventory	3
IV. Hazardous Non-Routine Tasks	3
V. Unlabeled Pipes	4
VI. Informing Contractors / Temporary Help	4
VII. Labeling	4
VIII. Safety Data Sheets	6
IX. Employee Information & Training	8
X. Definitions	9
XI. GHS Pictograms and Hazards	11

Appendices

- A. Hazardous Chemical Inventory
- B. Container Labeling
- C. Laboratory Door Sign Request Form

RESPONSIBILITIES

The following is a list of all who are involved in the HAZCOM Program and their responsibilities:

The Employee shall:

- Remain alert to the potential hazards of all materials in their workplace.
- Consult SDS's for specifics concerning hazardous chemicals.
- Follow appropriate safe work practices.

The Environmental Health & Safety Office shall:

- Provide new employees with HAZCOM Training.
- Maintain HAZCOM Training Records.
- Update the HAZCOM Program as necessary.
- Provide employees with consultation regarding the safe use of hazardous chemicals.
- Review Chemical Inventories on BioRAFT.
- Maintain SDS inventory on MSDSonline.
- Provide contractors with access to the written HAZCOM Program.
- Evaluate the HAZCOM program of each department as necessary.

The HAZCOM Program Representative shall:

- Review and update the Chemical Inventory at least annually and update in BioRAFT system.
- Obtain and maintain the SDS collection for their department.
- Review new and revised SDS's for health and safety information.
- Provide contractors with SDS's and chemical inventories as needed.
- Ensure that all containers are properly labeled upon receipt and during use.
- Send a copy of each incoming SDS to the EHSO.
- Maintain training records of employees in their department.

The Supervisor shall:

- Provide information about chemical exposure during routine and non-routine tasks, including unlabeled pipes.
- Contact the EHSO to schedule training for new employees upon their employment.
- Provide employees with consultation regarding the safe use of hazardous chemicals.

I. INTRODUCTION

The Occupational Safety and Health Administration (OSHA) issued the Hazard Communication Standard (29 CFR 1910.1200) to ensure that the hazards of all chemicals produced, imported, or used in the workplace, are evaluated, and that this hazard information is transmitted to affected employers and employees. The goal of the Hazard Communication (HAZCOM) Standard is to establish uniform requirements that will aid in reducing the number of chemically related occupational illnesses and/or injuries.

Chemical manufacturers and importers are required to convey chemical hazard information to employers by means of labeling and Safety Data Sheets (SDS). Employers are required to have a HAZCOM Program which will provide hazard information to their employees by means of container labeling, SDS's, training, a written HAZCOM Program, and other forms of warning. These requirements will allow employees to participate in and support the protective measures instituted in their workplace.

Old Dominion University (ODU) is firmly committed to providing each of its employees a safe and healthful working environment. In order to achieve this goal and to comply with OSHA's HAZCOM Standard, this written program has been developed for ODU's work areas, other than laboratories, where chemical hazards are encountered. This program is generic and is designed to be augmented with department-specific information. A copy of this written program will be available for employee review in a location that is readily accessible to them during their work shifts. A copy of this program will also be available in the Environmental Health and Safety Office (EHSO).

Many workplace procedures require the use of chemicals that have potentially hazardous properties. When using these chemicals, all employees must be aware of the identity, toxicity and other hazardous properties of the chemicals, in order to adequately protect themselves. This written HAZCOM Program contains an inventory of all hazardous chemicals used in the work area, SDS's for these chemicals, and the details of ODU's hazardous chemical labeling policy. It also contains the training procedures that have been established, the means by which ODU informs employees of the hazards associated with non-routine tasks, and the way in which ODU informs outside contractors of the hazards to which their employees may be exposed.

Access to this written HAZCOM Program is given to employees of ODU, their designated representatives, the Assistant Secretary of Labor for Occupational Safety and Health, and the Director of the National Institute for Occupational Safety and Health (NIOSH) in accordance with 29 CFR 1910.20.

The success of this HAZCOM Program depends greatly upon the extent of cooperation given by every employee. It is the responsibility of every employee to be alert to the potential hazards of all materials in their workplace, to consult the SDS's

for the specifics concerning the hazardous chemicals with which they work, and to follow the appropriate work practices and guidelines that have been established to protect their health and safety. The HAZCOM Program Representative from each department will be held responsible for certain necessary tasks to ensure the implementation of this program and to assist the EHSO. The HAZCOM Program Representative will review their chemical inventory and SDS's at least annually and update as necessary. The HAZCOM Program will be reviewed at least annually and updated as necessary by the EHSO.

II. HAZARDOUS CHEMICAL INVENTORY

An inventory of all known hazardous chemicals stored and/or used in this work area is contained in **Appendix A**. The inventory will serve as an index to the SDS's for chemicals used in this work area. Both the name and quantity of the chemical will be indicated on the inventory. The name of the chemical appearing on the Chemical Inventory will be the same name that appears on the manufacturer's label and the SDS for that chemical. The quantity of the chemicals will be expressed in appropriate units (i.e. ounce, liter or gallon for liquids and ounce, gram or pound for solids). Whenever new chemicals are obtained, they must be added to this inventory and the EHSO must be informed of the addition. The HAZCOM Program Representative is responsible for keeping the inventory updated. A copy of the inventory will be requested by the EHSO annually.

III. HAZARDOUS NON-ROUTINE TASKS

Each work area supervisor and remote project supervisor is responsible for providing information about any hazardous chemicals an employee may be exposed to during the performance of a non-routine task. The information provided must also include any information of hazardous substances in unlabeled pipes that may be present in the work area. A non-routine task is defined as one that is performed but not as a part of the usual daily or weekly work routine. An example would be chemically washing down walls of a work area twice a year.

To perform hazardous non-routine tasks:

1. Identify hazardous non-routine tasks by work area.
2. Identify the products used to perform the task which contain hazardous substances.
3. Obtain SDS's for the products discovered in step two.
4. Prior to performance of the non-routine task assure that the employees who are going to perform the task have been informed and trained on the use of the products containing the hazardous substance(s).

NOTE: If other employees are in the area during the performance of the hazardous non-routine task, be sure they are informed of what is going on. If possible, post and rope off the work area if there is a potential of accidental exposure.

IV. UNLABELED PIPES

Pipes in which chemicals are transferred are not required to be labeled; however, the employee needs to be aware of potential hazards. Prior to starting work in areas housing unlabeled pipes, the employee shall contact the EHSO to determine the identity of the chemical in the pipes, the potential hazards associated with the chemical, and the safety precautions that should be implemented.

V. INFORMING CONTRACTORS AND/OR TEMPORARY HELP

- A. Temporary help - will be treated as a new employee and must be provided all of the orientation and training required of a new employee placed in a work area of the university where products are used that contain hazardous substances.
- B. Sub-Contractors - the EHSO is responsible for providing sub-contractors with a copy of the written HAZCOM Program and access to any SDS's for chemicals in the ODU inventory that their employees may be exposed to while on the job site. The contractors are responsible for training their own employees and providing them with SDS's that are specific to their own chemicals.

The EHSO will also obtain and disseminate any information about hazardous chemical substances that the contractor is bringing to the campus of ODU. The chemical(s) and SDS's will be evaluated by the EHSO to determine if they pose any new or significant risks to ODU employees. ODU reserves the right to refuse to allow a contractor to use or manufacture a specific chemical if it poses an excessive risk or would necessitate additional training for ODU employees.

VI. LABELING

All containers of hazardous chemicals must be labeled properly according to the Hazard Communication Standard's requirements. See **Appendix C** for examples of proper container labels. These requirements state that the container label must include:

1. The identity of the hazardous chemical(s).
2. Proper or scientific name (e.g. acetone)
3. Common name (e.g. salt for sodium chloride)
4. Trade name (e.g. Lysol)
5. Proprietary name (e.g. ZEP Brake solution)
6. Product code (e.g. H2561)

7. The appropriate hazard warnings for employee protection, e.g. , any words, pictures, symbols, or combination thereof, which convey the hazards associated with the chemical(s) in the container.
8. The manufacturer's name, address, and phone number.

Therefore, no hazardous chemical will be used in any of the work areas unless it is appropriately labeled with at least the following information:

1. Identity of the hazardous chemical(s).
2. Appropriate hazard warnings.
3. Name and address of the chemical manufacturer.

All labels must be legible, in English, and prominently displayed on the container. If the hazardous chemical is regulated by OSHA in a substance-specific health standard, the label or other form of warning used must be in accordance with the requirements of that standard. For example, any carcinogenic compound must be labeled in accordance with 29 CFR 190.101 - 152.

Stationary Source Containers - the labels on these may be replaced by signs, placards, process sheets, batch tickets, operating procedures, or other such written materials as long as the alternative method identifies the containers to which it is applicable and expresses the required information. The written materials shall be readily accessible to the employees in their work area throughout each work shift.

Portable Containers - labels are not required on portable containers providing the following conditions are met:

1. The contents of the portable container are for immediate use by the person making the transfer, AND
2. The portable container is used ONLY by, and remains under the control of, the person making the transfer, AND
3. The unlabeled portable container is used ONLY within the work shift during which it was originally filled.

Any portable container of hazardous chemical(s) not intended for immediate use will be labeled with the required information mentioned before.

No label is to be defaced or removed unless the container is immediately marked with the required information. Any container without a label should be reported immediately to the work area supervisor.

Any new information significant to the hazards of a chemical shall be placed on the label within 30 days of learning the new information.

The name of the chemical that appears on the manufacturer's label or the in-house label will be the same as the name on the Hazardous Chemical Inventory and the SDS

for that substance. In addition, all contractors will be required to label all containers of contractor owned chemicals to ensure that they are labeled in accordance with the HAZCOM Standard.

VII. SAFETY DATA SHEETS

Safety Data Sheets (SDS) are a key element in the HAZCOM Program. They are designed to provide workers with the information needed to establish safe working procedures when using hazardous chemicals.

The HAZCOM Program Representative is responsible for obtaining and maintaining the SDS system for their work area. The Program Representative will review new and revised SDS's for health and safety information. In addition, the Program Representative will forward a copy of new or revised SDS's to the EHSO. Any new or significant change in health and safety information will be given to the appropriate supervisors for dissemination to affected employees.

The Program Representative from each work area will keep SDS's on file for hazardous chemicals used or stored in that area. If a SDS is not on file for a hazardous chemical, the Program Representative or supervisor will request one from the manufacturer.

EHSO has a contract agreement with MSDSONline. MSDSONline is a commercial management system that eliminates the need to retain and manage paper ("hard") copies of SDSs - which was traditionally done in a three ring binder. Instead, SDSs are managed electronically, which automates the task of keeping those binders up-to-date.

According to the HAZCOM Standard, all SDS's must be in English and must contain the following information:

1. Identity (as used on Label)

- A) If the hazardous chemical is a single substance, its chemical and common name(s).
- B) If the hazardous chemical is a mixture which has been tested as a whole to determine its hazards, the chemical and common name(s) of the ingredients which contribute to these known hazards, and the common name(s) of the mixture itself.
- C) If the hazardous chemical is a mixture which has not been tested as a whole:
 - a) The chemical and common name(s) of all ingredients which have been determined to be health hazards, and which comprise 1% or greater of the composition, including

chemicals that have been identified as carcinogens if the concentrations are 0.1% or greater, and

- b) The chemical and common name(s) of all ingredients which have been determined to be health hazards, and which comprise less than 1% (0.1% or carcinogens) of the mixture, if there is evidence that the ingredient(s) could be released from the mixture in concentrations which would exceed an established OSHA permissible exposure limit or ACGIH Threshold Limit Value, or could present a health risk to employees; and
- c) The chemical and common name(s) of all ingredients which have been determined to present a physical hazard when present in the mixture.

2. Physical and Chemical Characteristics

Physical and chemical characteristics of the hazardous chemical, such as vapor pressure and flash point.

3. Physical Hazards

The physical hazards of the hazardous chemical including the potential for fire, explosion, and reactivity.

4. Health Hazards

The health hazards of the hazardous chemical, including signs and symptoms of exposure, and any medical conditions which are generally recognized as being aggravated by exposure to the chemical.

5. Routes of Entry

The primary routes of entry of the chemical into the body, such as inhalation, ingestion, or skin/eye absorption.

6. Exposure Limits

The OSHA permissible exposures limit (PEL), ACGIH Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the SDS.

7. Carcinogenicity

A chemical is considered a carcinogen if it is listed in the National Toxicology Program (NTP) Annual Report on Carcinogens (latest edition), or has been

found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA.

8. Precautions for Safe Handling and Use

Any applicable precautions for safe handling and use, including appropriate hygienic practices, protective measures during repair and maintenance of contaminated equipment, and recommended method for disposing of waste materials. Information on how to properly contain and handle the material in the event of spills or leaks.

9. Control Measures

Any applicable control measures such as appropriate engineering controls (e.g. area ventilation), work practices, or personal protective equipment.

10. Emergency and First Aid Procedures

Any emergency and first aid procedures known by the manufacturer, importer or employer preparing the SDS.

NOTE: An emergency phone number should be given at the beginning of each SDS in case further information is needed.

11. Date of Preparation

The date that the SDS was prepared or the date that the last changes were made.

12. Responsible Party

The name, address, and telephone number of the chemical manufacturer, importer, employer or other responsible party preparing or distributing the SDS, who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

VIII. EMPLOYEE INFORMATION AND TRAINING

The purpose of the HAZCOM Training Program is to inform employees about the hazardous chemicals that are in their work area. This is accomplished by providing employees with effective information and training at the time of their initial hiring, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area.

The following topics will be covered during the EHSO's training session:

- A) An overview of the requirements of the HAZCOM Standard.
- B) Operations involving the use of chemicals and location of chemicals in the work area.
- C) The location and availability of the written HAZCOM program, including the chemical inventory, and SDS's
- D) Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area.
- E) The physical and health hazards of the chemicals in the work area.
- F) Personal protective equipment and work practices that help to lessen or prevent exposure to chemicals.
- G) The details of ODU's Hazard Communication Program including the labeling system and the material safety data sheet, and how employees can obtain and use appropriate hazard information.

Following each training session, the employee is required to sign and date the training record. Training records will be maintained by the EHSO and copies will be sent to the HAZCOM Program Representative. The Program Representative will place the training records in **Appendix B** of this Plan in a designated training file.

IX. DEFINITIONS

Employee means any person hired by the University or Research Foundation as full or part-time faculty, staff, student, or work study personnel, who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Personnel such as office workers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

Environmental Health and Safety Office (EHSO) is responsible for ensuring that the University complies with all applicable federal, state and local environmental and occupational safety and health laws and regulations prescribed under the Codes of Federal Regulations (CFR) 10, 29, 40, and 49.

HAZCOM Program Representative means any employee volunteer from a designated department who will compile and disseminate SDS's to employees as necessary, maintain and update chemical inventories, and manage HAZCOM training records for their department.

Hazardous chemical means 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. Any chemical listed in 29 CFR 1910, Subpart Z.

Safety Data Sheet (SDS) means a written or printed document that is prepared by the manufacturer or importer which identifies the hazardous chemicals, health and

physical hazards, exposure limits, and precautions that should be taken when working with the chemical.










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. Eight pictograms are designated under this standard for application to a hazard category.

Portable container means a container to which hazardous chemicals are transferred for use during a work period (i.e. 8 hours).

Supervisor means any employee responsible for other employees in a designated work area.

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

Hazard Communication Standard Pictograms and Hazards

<p style="text-align: center;">Health Hazard</p>  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	<p style="text-align: center;">Flame</p>  <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	<p style="text-align: center;">Exclamation Mark</p>  <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
<p style="text-align: center;">Gas Cylinder</p>  <ul style="list-style-type: none"> • Gases Under Pressure 	<p style="text-align: center;">Corrosion</p>  <ul style="list-style-type: none"> • Skin Corrosion/Burns • Eye Damage • Corrosive to Metals 	<p style="text-align: center;">Exploding Bomb</p>  <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides
<p style="text-align: center;">Flame Over Circle</p>  <ul style="list-style-type: none"> • Oxidizers 	<p style="text-align: center;">Environment (Non-Mandatory)</p>  <ul style="list-style-type: none"> • Aquatic Toxicity 	<p style="text-align: center;">Skull and Crossbones</p>  <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic)

APPENDIX A
HAZARDOUS CHEMICAL INVENTORY

BioRAFT:

<https://www.odu.edu/facultystaff/university-business/safety/hazmat/chemical-inventories>

APPENDIX B

TRAINING RECORDS

(All copies of HAZCOM training records go here)

APPENDIX C

CONTAINER LABELING



Label required for Hazardous Waste / Unwanted chemicals

HAZARDOUS WASTE	
Chemical Name(s)	Amount
Acetone	4 L
Chemical Hazard Classification: <input type="checkbox"/> Flammable <input type="checkbox"/> Corrosive <input type="checkbox"/> Reactive <input type="checkbox"/> Toxic/Poison	
DATE (EHS Use Only):	

These labels can be found here:

<http://www.odu.edu/content/dam/odu/offices/environmental-health-safety/docs/hazwaste-labels.pdf>

APPENDIX D

LABORTORY DOOR SIGN REQUEST FORM

Laboratory Door Sign Request

Date _____

General Information

Building:	Rm:
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Contact

Office Phone

Emergency Phone (24 hr number)

Principal Investigator:			
Alternate 1:			
Alternate 2:			

Hazard

Indicate each hazard in your lab based on the following

<input type="checkbox"/>	Biohazard	Contains any agent that is capable of causing disease in humans, plants or animals <i>Indicate Biosafety Containment Level:</i> <input type="checkbox"/> BSL-1 <input type="checkbox"/> BSL-2
<input type="checkbox"/>	Carcinogen	Suspected carcinogens are in use.
<input type="checkbox"/>	Compressed Gas	Rooms or cabinets contain compressed gases.
<input type="checkbox"/>	Corrosive	Corrosive liquids in quantities greater than 1 gallon in use.
<input type="checkbox"/>	Flammable	Flammable liquids in quantities greater than 1 gallon in use, contains a flammable gas or flammable storage cabinet.
<input type="checkbox"/>	High Voltage	Equipment capable of generating high-voltages (> 420 volts) in the course of its operation
<input type="checkbox"/>	Laser	Laser(s) in use: <i>Indicate Laser Classification:</i> <input type="checkbox"/> Class 3B <input type="checkbox"/> Class 3R <input type="checkbox"/> Class 4 <i>Other:</i>
<input type="checkbox"/>	Oxidizer	Oxidizers in quantities greater than 1 gallon in use.
<input type="checkbox"/>	Radioactive	Any amount of radioactive material is in use: <i>Indicate:</i> <input type="checkbox"/> Open Source <input type="checkbox"/> Sealed Source
<input type="checkbox"/>	Toxic	Material rated toxic in quantities greater than 10 pounds in use.
<input type="checkbox"/>	X-Ray	List the type of equipment in use: <input type="checkbox"/> Dental <input type="checkbox"/> Fluro <input type="checkbox"/> XRD <i>Other:</i>
<input type="checkbox"/>	Water Reactive	Any chemicals in the lab that could violently react with water: <i>Submit list to EH&S</i>
<input type="checkbox"/>	No Custodial Services Required	Room should not be entered for cleaning due to potential hazards in the lab.

Add any laboratory-specific information for Emergency Responders:

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Send completed form to EH&S: **Email:** ehsdept@odu.edu / **Fax:** 683-6025 / **Campus Mail:** Spong Hall, Suite 2501