The purpose of this Hazard Communication Plan is to communicate information concerning chemical hazards and the appropriate protective measures to employees in accordance with 29 CFR 1910.1200. This plan addresses hazardous chemical identification and classification, information on Safety Data Sheets (SDS), chemical container labels, hazard control methods, employee training and departmental responsibilities.
Emergency Telephone Numbers

Emergency Numbers:

Campus Police
On-Campus Phone: 6710
Off-Campus Phone: 828-251-6710

Campus Police are to be used for all On-Campus Emergencies

Important Numbers:

EH&S Professional 258-7692
EH&S Officer 251-6038 safety@unca.edu
Emergency Management 258-7676
Facilities Management 251-6564

Information to Provide for Emergency Calls

- Your Name
- Type of Emergency (fire, Injury, Chemical Spill, etc.)
- Location of Emergency (Building, Room Number)
- Extent of Emergency (Rooms or Number of People Involved)

STAY ON THE TELEPHONE
UNTIL DISPATCHER HANGS UP FIRST!
Contents

Purpose ................................................................................................................................................. 3

Hazardous Chemical Identification and Classification ............................................................................ 3
  Health Hazard Criteria ............................................................................................................................ 3
  Physical Hazard Criteria .......................................................................................................................... 4

Safety Data Sheet(s) ................................................................................................................................ 5

Chemical Container Labels ..................................................................................................................... 5

Hazard Control Methods .......................................................................................................................... 9
  Administrative Controls ............................................................................................................................ 9
  Engineering Controls ............................................................................................................................... 9
  Personal Protective Equipment (PPE) ........................................................................................................ 9
    Eye and Face Protection ........................................................................................................................ 9
    Hand Protection .................................................................................................................................. 10
    Respiratory Tract Protection ................................................................................................................. 10

Employee Training ................................................................................................................................... 11

Department Responsibilities .................................................................................................................. 11
Purpose

The purpose of this Hazard Communication Plan is to communicate information concerning chemical hazards and the appropriate protective measures to employees in accordance with 29 CFR 1910.1200. This plan addresses hazardous chemical identification and classification, information on Safety Data Sheets (SDS), chemical container labels, hazard control methods, employee training and departmental responsibilities.

Hazardous Chemical Identification and Classification

A **hazardous chemical** is one which is a health hazard or a physical hazard as defined by OSHA 29 CFR 1910.1200.

**Health Hazard Criteria**

Health hazard means a chemical that is classified as posing one of the following hazardous effects: Acute toxicity, skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard as defined in 1910.1200 App A.

Hazard Classes are broken down into Hazard Categories based on the test criteria contained in Appendix A to CFR 1910.1200-HEALTH HAZARD CRITERIA. Lower numbers represent the more severe Hazard Category.

**CFR 1910.1200 Appendix A Health Hazard Criteria**


<table>
<thead>
<tr>
<th>HAZARD CLASS</th>
<th>HAZARD CATEGORY</th>
<th>(Most Hazardous to Least Hazardous)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>1A</td>
<td>1B</td>
</tr>
<tr>
<td></td>
<td>1C</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>1</td>
<td>2A</td>
</tr>
<tr>
<td></td>
<td>2B</td>
<td>3</td>
</tr>
<tr>
<td>Respiratory or Skin Sensitization</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>1A</td>
<td>1B</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>1A</td>
<td>1B</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>1A</td>
<td>1B</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity:</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Single Exposure</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity:</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Repeated or Prolonged Exposure</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Aspiration</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Simple Asphyxiants</td>
<td>Single Category</td>
<td></td>
</tr>
</tbody>
</table>

3
Physical Hazard Criteria

Physical hazard means a chemical that is classified as posing one of the following hazardous effects: Explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid, or gas); self-reactive; pyrophoric (gas, liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; in contact with water emits flammable gas; or combustible dust as defined in 1910.1200 App. B.

Hazard Classes are broken down into Hazard Categories based on the test criteria contained in Appendix B to CFR 1910.1200-Physical Criteria. Lower numbers represent the more severe Hazard Category.

CFR 1910.1200 Appendix B Physical Criteria

<table>
<thead>
<tr>
<th>HAZARD CLASS</th>
<th>HAZARD CATEGORY</th>
<th>UNSTABLE EXPLOSIVES</th>
<th>Div. 1.1</th>
<th>Div. 1.2</th>
<th>Div. 1.3</th>
<th>Div. 1.4</th>
<th>Div. 1.5</th>
<th>Div. 1.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosives</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td>Div. 1.3</td>
<td>Div. 1.4</td>
<td>Div. 1.5</td>
<td>Div. 1.6</td>
</tr>
<tr>
<td>Flammable Gases</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammable Aerosols</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Gases</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gases Under Pressure</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammable Liquids</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Reactive Chemicals</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pyrophoric Liquids</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pyrophoric Solid</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pyrophoric Gases</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Heating Chemicals</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Liquids</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Solids</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organic Peroxides</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrosive to Metals</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combustible Dusts</td>
<td></td>
<td></td>
<td>Div. 1.1</td>
<td>Div. 1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Safety Data Sheet(s)**

Safety Data Sheets (SDS) are documents containing hazard and safety information provided for each chemical or chemical reagent mixture by its manufacturer or supplier as required under the OSHA Hazard Communication Standard. Employees should read and be familiar with the SDSs of chemicals they are working with. SDSs must be available for employees to access at all times. In case of a spill or exposure, physical copies of SDSs must be available for first responders.

Information contained in SDSs includes:

- Identification of the substance or mixture and of the supplier
- Hazards Identification
- Composition/information on ingredients
- First aid measures
- Firefighting measures
- Accidental release measures
- Handling and storage
- Exposure controls/personal protection
- Physical and chemical properties
- Stability and reactivity
- Toxicological Information
- Ecological information
- Disposal considerations
- Transport information
- Regulatory information
- Other information including information on preparation and revision of the SDS

If assistance is needed with interpreting and applying SDS information to your work situation, consult with your Supervisor or EH&S Office.

**Chemical Container Labels**

Chemical manufactured container labels provide valuable hazard identification information. Manufacturers are required to sell chemicals with labels which identify the chemical and hazards associated with the chemical. Labels on purchased chemicals include:

- The product identifier used on the SDS
- Name, address, telephone number of the responsible party
- Signal word, hazard statement(s), pictogram(s), and precautionary statement(s)
1) Signal Word is either “Warning” or “Danger” depending on the severity of the hazard. “Danger” is a more severe signal word than “Warning”.  
2) Pictogram is a universal graphic representation of the hazard class.  
3) Hazard Statement is intended to form a set of standardized phrases about the hazards of chemical substances and mixtures.  
4) Precautionary Statement is a statement indicating how the product should be handled to minimize risks to the user.  

Chemical Label Pictograms:
Employees are responsible for:

- Inspecting incoming containers to be sure that labels are attached and are in good condition and contain the information outlined above. If a new chemical does not have a proper label, do not except it and notify the EH&S Office.
- Reading the container label and SDS each time a newly purchased chemical is used.
- Ensuring that chemical container labels are not removed or defaced, except when containers are empty.

Secondary containers and foreign containers must also be labeled. If a hazardous chemical is transferred to a different container, the container must identify the chemical and the associated hazards. Follow the instructions below for labeling secondary or foreign containers.

- Identify each chemical in a secondary or foreign container. Chemical constituents must be spelled out in English- No abbreviations or chemical formulas.
- Identify the associated hazards using pre-made labels.

All hazardous chemicals transferred into secondary or foreign containers should be labeled as to the chemical contents and identify the chemical's primary hazard.
Emergency Response:

Two common ways of identifying chemical hazards on containers and areas where chemicals are in use:

**NFPA (National Fire Protection Association)**

Hazardous Materials Classification

The NFPA label is a diamond with color coded sections and numbers to represent the major relative hazards presented by the chemical in terms of fire (RED), reactivity (YELLOW), special hazard (WHITE), and toxicity (BLUE). Numbers from 0 to 4 indicate the severity of the risk where four (4) indicates the highest danger.

**HMIS**

(Hazardous Material Identification System)

The HMIS/HMIG label is very similar to the NFPA label. The color and number coding system is identical but a bar system is used instead of a diamond. Personal protective equipment that should be donned while handling this material is also identified. These labels are used to identify the hazards of chemicals transferred into secondary or foreign containers.
Hazard Control Methods

Hazard control methods consist of administrative controls, engineering controls, and personal protective equipment. Control methods should begin with administrative controls to eliminate the hazards. If administrative controls do not fully protect the employee from hazards, engineering controls should be implemented. In addition to administrative and engineering controls personal protective equipment should always be worn.

Administrative Controls

Administrative controls consist of various policies and requirements that are established at an administrative level. They may include:

- Ensuring that all department personnel have been provided adequate training.
- Restricting access to areas in which hazardous chemicals are used.
- Posting appropriate signs to identify specific hazards within an area.
- Requiring that various standard practices for chemical safety and good housekeeping be observed at all times.

Engineering Controls

Procedures involving volatile chemicals should be conducted outdoors or by using local exhaust ventilation. Local exhaust ventilation may include fume hoods or flexible capture tubes.

Personal Protective Equipment (PPE)

Job Safety Analysis must be performed for each procedure to determine the level and type of PPE to be worn. Departmental Supervisors are responsible for providing PPE and conducting Job Safety Analysis for work in their respective areas. PPE should always fit and be worn correctly to appropriately protect the worker from the hazard.

Eye and Face Protection

Safety Glasses

OSHA approved safety glasses are required when hazardous chemicals are being used.

Goggles

Goggles are required where there is a potential of splashing chemicals or flying objects to a degree higher than that of requiring safety glasses. Examples include when working with glassware under elevated or reduced pressure, or high temperatures and when handling larger amounts of corrosive chemicals or solvents.
Face Shields

Safety glasses and goggles are not designed to protect the remainder of the face and throat. Face shields protect the face and throat areas from chemical splashes and flying objects which may cause severe burns and/or lacerations. Safety glasses or goggles are to be worn beneath a face shield at all times.

Eye and Face Protection Associated Costs

UNC Asheville is committed to providing eye and face protection devices at no charge to employees. Each department is responsible for funding and issuing appropriate protection to those employees whose job duties require eye protection. Students participating in academic activities where eye protection is necessary can purchase eye protection from the campus bookstore.

Prescription safety glasses will be available for permanent University employees who work in areas where eye protection is required. Fees associated with scheduling and payment for eye examinations to obtain a prescription for safety glasses are the responsibility of the employee. The expense of procuring prescription safety glasses will be the responsibility of the department. The EH&S Office should be contacted regarding procuring prescription safety glasses.

Hand Protection

Chemical absorption, or contact with the skin, is a route of exposure which often leads to injury. Chemical absorption through the skin can cause irritation, irreversible chemical burns or can produce systemic poisoning.

Gloves

Proper glove use will protect the hand and its digits from chemical exposure. Gloves can also protect against hot, cold or other physical hazards found in the work area. Through a Job Safety Analysis, determine the correct type of glove required for the task at hand. All gloves are not equal and no glove provides suitable protection against all hazards. When selecting a glove consider the type of exposure, the hazardous materials involved and the duration of exposure. Check the chemical resistance data from the manufacturer for each brand and thickness of glove before selecting a glove. If a chemical is not listed on a glove selection chart, contact the UNC Asheville EH&S Office for assistance.

Respiratory Tract Protection

Exposure to hazardous chemicals should be controlled with the use of engineering controls. If exposure levels cannot be contained below the Action Limit, (one half of the Permissible Exposure Limit (PEL)) or if there are questions on chemical exposure, contact UNC Asheville EH&S to determine if respirator use in necessary.
Employee Training

Every employee at UNC Asheville will be trained on the contents of this Hazard Communication Plan. Training records will be kept in the Environmental Health and Safety Office. If non-routine tasks are to be performed by employees, a safety briefing will be held prior to beginning the task to discuss safety concerns of new hazardous chemicals introduced.

Department Responsibilities

It is the responsibility of all employees at UNC Asheville to understand the contents of this Plan. Each Department/Sub-Department shall keep a chemical inventory list and list of Safety Data Sheets for each chemical in use. An updated chemical inventory shall be sent to the Environmental Health and Safety Office on an annual basis. Chemical Inventories should include: location (building, room, and location), chemical name, quantity, size and unit.

Example Chemical Inventory

<table>
<thead>
<tr>
<th>Building</th>
<th>Room</th>
<th>Location</th>
<th>Chemical Name</th>
<th>Quantity</th>
<th>Size</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sam Miller</td>
<td>Receiving</td>
<td>Flam. Cabinet</td>
<td>Paint Thinner</td>
<td>8</td>
<td>3.78</td>
<td>liter</td>
</tr>
<tr>
<td>Owen Hall</td>
<td>138</td>
<td>Corrosives Cabinet</td>
<td>Nitric acid</td>
<td>2</td>
<td>2.5</td>
<td>liter</td>
</tr>
</tbody>
</table>