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# Hazard Communication Program

UNC Greensboro

Revised April 2020

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## **1. Introduction**

As part of UNCG's overall safety and health program, a chemical Hazard Communication Program has been established. The Hazard Communication Program is designed to comply with the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard and align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

## **2. Standard**

NCOSHA part 1910.1200 -- Hazard Communication Standard; North Carolina Department of Labor, Division of Occupational Safety and Health.

## **3. Objective**

The objective of the Hazard Communication Program is to classify chemical hazards and prevent occupational injuries and illnesses related to chemical exposure by educating employees about workplace chemical hazards. This program highlights the methods of communicating the objective through container labeling and other forms of warning, safety data sheets and employee training.

## **4. Scope**

The Hazard Communication Program applies to all work areas where hazardous chemicals are known to be present, both under normal conditions and in a foreseeable emergency. The Director of Environmental Health and Safety has the responsibility for overall coordination of the Hazard Communication Program. Laboratory areas are exempt from this UNCG program, if they are in full compliance with the UNCG Chemical Hygiene Plan.

## **5. Hazardous Chemical Classifications**

The definition of hazardous chemicals as given by OSHA is any chemical which is a physical hazard or health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

### **Physical Hazard Characteristics**

- Explosives, Flammable Gases, Flammable Aerosols, Oxidizing Gases, Gases Under Pressure, Flammable Liquids, Flammable Solids, Self-Reacting Chemicals, Pyrophoric

Liquids, Self-Heating Chemicals, Water Reacting Chemicals, Oxidizing Liquids, Oxidizing Solids, Organic Peroxides, Corrosive to Metals

### **Chemical Hazard Characteristics**

- Acute Toxicity, Skin Corrosion/Irritation, Serious Eye Damage/Irritation, Respiratory or Skin Sensitization, Germ Cell Mutagenicity, Carcinogenicity, Reproductive Toxicity, Specific Target Organ Toxicity for Single/Repeated/Prolonged Exposure, Aspiration Hazard.

### **Simple Asphyxiant**

- 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.

### **Pyrophoric Gas**

- 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.

### **Combustible Dust**

- 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.

### **Hazard Not Otherwise Classified (HNOC)**

- 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 above.

## **6. Hazard Communication Program**

The written Hazard Communication Program outlines and describes how the following information will be organized and transmitted:

### **Information**

- List(s) of hazardous chemicals known to be present in the workplace.
- Information on precautionary labels and other forms of warning for known hazardous chemicals in the workplace.
- Safety data sheets (SDS's) for known hazardous chemicals in the workplace.
- Methods used to provide employee information and training.
- Methods used to inform employees of hazards of non-routine work.
- Methods used to inform contractor employers of any hazardous chemicals to which contractor employees may be exposed.

## **7. Hazardous Chemical List(s)**

Each Area Supervisor/Dept. Head has the responsibility to maintain a list of known chemicals in their immediate work area. The chemical list (hardcopy or electronic format) must be readily available to employees during their work shift. UNCG offers an online portal of SDSs. Electronic SDS can be accessed at MSDS Online via the EH&S website <https://safety.uncg.edu>.

Employees who have questions about their area specific chemical inventory list, should contact their immediate supervisor or the EH&S Dept.

## **8. Precautionary Labeling**

### **Incoming Containers in the Workplace**

Department Heads and Area Supervisors have the responsibility to insure all known hazardous chemicals present at UNCG must display a precautionary label with the following:

- Product identifier;
- Signal word;
- Hazard Statement(s);
- Pictogram(s);
- Precautionary statement(s) and,
- Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

If a label is missing or defaced, a new label must be requested through the chemical manufacturer or importer. An example request letter is provided in the appendices for reference purposes.

### **Portable or Secondary Containers**

All portable containers of hazardous chemicals require labeling. Portable or secondary container labels must either meet the same requirement listed in the previous section or, at a minimum, have the product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals. Employees who have questions about portable container labeling should contact their immediate supervisor. The employee who uses the portable container is responsible for placing the label on the container, and the Department Manager/Area Supervisor is responsible to see that labeling is done.

### **Freight Containers/Vessels**

All received freight containers, and freight vehicles shall retain their hazardous material regulations markings until the material inside is sufficiently removed to prevent any potential hazards. For non-bulk items which will not be re-shipped, the provisions above will be met if a standard HazCom label is affixed. All freight containers/vessels which routinely store bulk chemical products shall be labeled, tagged or marked in accordance with this section in the following manner:

- Name of contents (chemical and/or common name)
- Identity of process lines served by vessel (if not obvious by machine arrangement)
- Appropriate hazard warning

## **9. Safety Data Sheets (SDS's)**

### **SDS Format**

SDS's are written or printed material concerning product hazard determination, which are prepared and distributed with chemicals by chemical manufacturers and distributors. SDS's are written in English and contain the following information by section:

- Identification;
- Hazard(s) Identification;
- Composition/Information on ingredients;
- First-Aid measures;
- Fire-fighting 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; and
- Other information, including date of preparation or last revision.

### **Obtaining Safety Data Sheets (SDS's)**

The manufacturer, or importer of a chemical is required to develop and distribute a Safety Data Sheet (SDS) that details the specific information about the chemical's hazards. In most cases, the SDS is also available for download from the manufacturer or importers website. Each Area Supervisor is responsible for obtaining and collecting SDS's for the chemicals that they utilize. SDS for all chemicals present in the workplace must be readily accessible to personnel at all times. These SDS can be kept in paper or electronic form for immediate access.

The university subscribes to a service for immediate access to SDS's through an online portal on the EH&S website. In addition to the SDS obtained and provided by the chemical

manufacturer, Area Supervisors can access and update their SDS's electronically utilizing this portal. Electronic SDS can be accessed at MSDS Online via the EH&S website <https://safety.uncg.edu>. If a hardcopy of SDSs is utilized, the following guidelines should be followed:

- A list of the chemicals located in the work area should be inserted at the front of the notebook for anyone to be able to easily access/find an SDS form.
- The SDS book must be prepared in an orderly fashion so that anyone can easily locate a specific SDS form in the event of an emergency. (Preferably in alphabetical order.)
- When new chemicals are added, an SDS must be made available to all affected employees.
- Routinely update notebook and remove old SDS forms for chemicals no longer in use.

## **10. Employee Training and Education**

Effective employee training and education is the most critical component of the hazard communication program. A properly conducted training program will ensure that employees are aware of hazards in the workplace and apply appropriate control measures to protect themselves. Employees are trained upon initial assignment, and by their supervision whenever a new chemical hazard is introduced. Whenever a new hazard is introduced, the immediate supervisor is responsible for ensuring that specific hazard training is provided to all affected employees prior to the introduction of the hazard.

The Department of Environmental Health and Safety coordinates the employee training and education program.

## **11. Contractors**

It is the policy of UNCG that when contractors are working on UNCG property, they must comply with all OSHA standards and requirements, where applicable. The applicable UNCG Project Manager will share with the contractor any known chemical hazards which may be present at the specific worksite prior to the commencement of work. In addition, any hazardous chemicals which will be brought on site by the contractor will be discussed prior to the commencement of work by the UNCG Project Manager. The EH&S Dept. is available for assistance in identifying any specific hazards. A form has been provided in the appendices below to document the exchange of information. All correspondence with the contractor should be filed with the specific project documentation.

## **12. Hazard Communication Program Annual Review**

The Hazard Communication Program will be reviewed at least annually by the Department of Environmental Health and Safety. The review will include an assessment of any regulatory updates, procedural changes and program compliance.

## **Appendix A: Hazard Communication GHS Guide**



# HAZARD COMMUNICATION PROGRAM

## TRAINING

All personnel with potential exposure to hazardous materials must be trained when first assigned to the workplace and when a new chemical hazard is introduced into the work area. Training must include:

1. Hazards of chemicals present in the workplace (*see reverse*)
2. How to access a list of chemicals present in the workplace (*Inventory*)
3. How to access and interpret information on Safety Data Sheets (*SDS*)
4. Labeling requirements and methods for the facility and the meaning of hazard symbols (*see reverse*)

## INVENTORY

A list of all chemicals present in the workplace must be readily accessible to personnel at all times. The list does not need to include quantities and can be kept in paper or electronic form.

## SAFETY DATA SHEETS (SDS)

SDS for all chemicals present in the workplace must be readily accessible to personnel at all times. SDS can be kept in paper or electronic form. Electronic SDS can be accessed at MSDS Online via the EH&S website <https://safety.uncg.edu>.

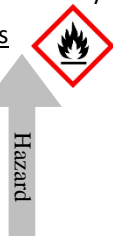
SDS will include information organized into the following sections:

- |   |                                     |
|---|-------------------------------------|
| 1. Identification                         | 9. Physical and Chemical properties |
| 2. Hazard(s) identification               | 10. Stability and reactivity        |
| 3. Composition/information on ingredients | 11. Toxicological information       |
| 4. First-aid measures                     | 12. Ecological information          |
| 5. Firefighting measures                  | 13. Disposal considerations         |
| 6. Accidental release measures            | 14. Transport information           |
| 7. Handling and storage                   | 15. Regulatory information          |
| 8. Exposure control/personal protection   | 16. Other information               |

The hazard ratings of the new GHS system are opposite the older NFPA/HMIS system.

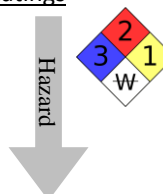
### GHS Hazard Categories

- 1 = Severe Hazard
- 2 = Serious Hazard
- 3 = Moderate Hazard
- 4 = Slight Hazard
- 5 = Minimal Hazard



### NFPA/HMIS Hazard Ratings

- 0 = Minimal Hazard
- 1 = Slight Hazard
- 2 = Moderate Hazard
- 3 = Serious Hazard
- 4 = Severe Hazard



## LABELS

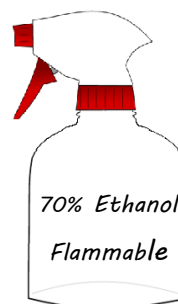
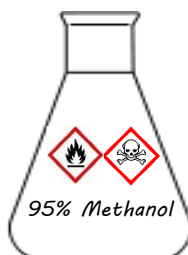
All containers of hazardous chemicals must be labeled, except for chemicals transferred to secondary containers which will be attended by the person making the transfer and used for less than one day.

Original manufacturer labels should not be removed. Label secondary containers with at least:

1. The product, chemical, or common NAME (must match the SDS identifier)
2. Words, pictures or symbols identifying the HAZARDS of the material.

Examples of acceptable labeling:

*Remember to check labels regularly for deterioration and relabel as needed.*



## FLAME



Flammable materials can burst into flames easily.

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

## HEALTH HAZARD



Prolonged exposure to these materials may cause health problems such as cancer, birth defects, asthma or damage to specific organs of the body.

- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

## EXCLAMATION MARK



These materials can cause immediate health effects such as skin rashes or respiratory irritation.

- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity (harmful)
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer

## FLAME OVER CIRCLE



Oxidizing materials cause other materials to catch fire or explode.

- Oxidizers

## SKULL & CROSSBONES



Exposure to these materials can cause immediate and possibly serious health problems.

- Acute Toxicity (fatal or toxic)

## CORROSION



Corrosive materials can eat away clothing, metals, working surfaces and other materials.

- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals

## GAS CYLINDER



Gases under pressure can explode, rocket and damage health if they are heated, ruptured or leaking.

- Gases Under Pressure

## ENVIRONMENT



These materials can kill fish or other wildlife that live in water.

- Aquatic Toxicity

## EXPLODING BOMB



Explosive materials can blow up.

- Explosives
- Self-Reactives
- Organic Peroxides<sup>0</sup>

## **Appendix B: QuickCard Label**



## Hazard Communication Standard Labels

OSHA has updated the requirements for labeling of hazardous chemicals under its Hazard Communication Standard (HCS). All labels are required to have pictograms, a signal word, hazard and precautionary statements, the product identifier, and supplier identification. A sample revised HCS label, identifying the required label elements, is shown on the right. Supplemental information can also be provided on the label as needed.




U.S. Department of Labor

For more information:



[www.osha.gov](http://www.osha.gov) (800) 321-OSHA (6742)

**SAMPLE LABEL**

<p>CODE _____ } <b>Product Identifier</b>          Product Name _____ }            Company Name _____ } <b>Supplier Identification</b>          Street Address _____ }          City _____ State _____ }          Postal Code _____ Country _____ }          Emergency Phone Number _____ }</p>	<p><b>Hazard Pictograms</b></p>  <p><b>Signal Word</b> <b>Danger</b></p>
<p>Keep container tightly closed. Store in a cool, well-ventilated place that is locked.          Keep away from heat/sparks/open flame. No smoking.          Only use non-sparking tools.          Use explosion-proof electrical equipment.          Take precautionary measures against static discharge.          Ground and bond container and receiving equipment.          Do not breathe vapors.          Wear protective gloves.          Do not eat, drink or smoke when using this product.          Wash hands thoroughly after handling.          Dispose of in accordance with local, regional, national, international regulations as specified.</p> <p><b>In Case of Fire:</b> use dry chemical (BC) or Carbon Dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.</p> <p><b>First Aid</b>          If exposed call Poison Center.          If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.</p>	<p><b>Highly flammable liquid and vapor.</b>  <b>May cause liver and kidney damage.</b> } <b>Hazard Statements</b></p> <p><b>Precautionary Statements</b></p>
<p><b>Supplemental Information</b></p> <p><b>Directions for Use</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Fill weight: _____ Lot Number: _____          Gross weight: _____ Fill Date: _____          Expiration Date: _____</p>	

## **Appendix C: Notice to Contractors**

UNC GREENSBORO  
**NOTICE TO CONTRACTORS**

Contractor's Name & Address

Re: OSHA Hazard Communication Standard

Dear \_\_\_\_\_,

In accordance with the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), (\_\_\_\_\_) is hereby notified of the attached list of UNCG's known hazardous chemicals that the contractor's employees may be exposed to while performing their work at:

Building: \_\_\_\_\_

Work Area: \_\_\_\_\_

Project Period: \_\_\_\_\_

Safety data sheets, which list appropriate protective measures as determined by the chemical manufacturer, or distributor, are available upon request. This request should be made through the Project Manager to the Environmental Health and Safety.

According to OSHA requirements, you must transmit this information to your affected employees.

By undersigning this letter, the contractor representative acknowledges:

- receipt of the above information
- contractor employee will comply with all applicable OSHA regulations while working on company property,
- a Hazard Communication Program is in effect for all employees on this contract.

Contractor Representative \_\_\_\_\_ Date \_\_\_\_\_