North Carolina Agricultural and Technical State University
OFFICE OF ENVIRONMENTAL HEALTH & SAFETY

Safety Manual

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Hazard Communication Program

The Hazard Communication Standard provides people the right-to-understand the hazards and identities of the chemicals they are exposed to in the workplace. When employees have this information, they may effectively participate in their employers' protective programs and take steps to protect themselves. In addition, the standard gives employers the information they need to design and implement an effective protective program for employees potentially exposed to hazardous chemicals.

This program provides information to assist staff in identifying and evaluating hazardous chemicals in their workplace. Training requirements for all staff required to use chemical containing products are also outlined.

The requirements of this program are based on the OSHA Hazard Communication Standard, 29 CFR 1910.1200 which has been revised to align with the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Authority

By authority delegated from the University Chancellor, the Vice Chancellor for Business and Finance is responsible for the safety of all University facilities. Under this authority, policies are developed to provide a safe teaching, research, service, housing and recreational environment.

Policy

The Hazard Communication Program covers all North Carolina Agricultural and Technical State University (NC A&T) employees, students and non-employee affiliates who work with chemicals in non-laboratory settings.

All covered individuals are expected to follow the requirements pertaining to Safety Data Sheet (formerly known as Material Safety Data Sheet) review, training, labeling and safe chemical use as outlined in this program.

Responsibilities

Environmental Health and Safety (EHS)

EHS is responsible for the administration of the Hazard Communication Program including the development and periodic updating of this written program. EHS will aid in the development of training programs and in providing technical information in response to queries from the affected Departments.

Individual Departments

Each affected Department is responsible for providing Hazard Communication training to all employees/students prior to working with hazardous chemicals at their work site. Department must ensure that containers are labeled appropriately. Departments are required to keep updated lists of the chemicals in their work areas (Appendix D: Chemical Inventory). Departments are required to maintain a current file of Safety Data Sheets (SDS) for the hazardous chemicals and products used in the workplace.

Employees/Students

Affected employees must attend required safety training. Employees/Students must review a products SDS and label, following their instructions and warnings. Employees/Students must ask for assistance if there are questions with interpreting the information and instructions presented in training classes or on the product SDS or label.

Contractors

Contractors are responsible for providing information and training relevant to the OSHA Hazard Communication Standard to their employees. Contractors are also responsible for notifying the University Project Manager and EHS if they will be using a hazardous chemical which could result in an exposure to University staff, students and visitors located in adjacent areas. The safety data sheet for products containing hazardous chemicals must be accessible for review at the project location.

Written Hazard Communication Program

EHS will develop and maintain this written document that provides an overview of the requirements of the Hazard Communication program.

Each Department is responsible for customizing the written program to include information specific to their workplace. The Hazard Communication Site Specific Information Sheet assists departments in customizing their hazard communication information (Appendix B).

The specific information required to be provided includes:

- A written inventory of the hazardous chemicals known to be present in the workplace
- The name and contact information of the designated responsible party for that department.
- The location and access information for the Safety Data Sheets (SDS) for each chemical containing product.
- The location of the department's hazard communication training records.
- Emergency response procedures.

Labels

All containers of hazardous chemicals used in the workplace must be labeled. The labels must be in English but warnings in foreign languages may be included to assist non-English speaking staff. Labels must include the identity of the hazardous chemical as well as the signal word, hazard statement, pictogram(s) and precautionary statement(s) related to the product.

The Hazard Communication Pictogram Explanation Sheet (Appendix C) provides information relevant to the pictograms required to be on container labels. Secondary containers into which hazardous chemicals are transferred from labeled containers and which are intended for the immediate use of the employee who performs the transfer are exempt from the labeling requirements. Once the container is left unattended, it must be properly labeled.

Safety Data Sheets

The Safety Data Sheet (SDS) provides relevant safety information and warnings applicable to hazardous chemicals. The SDS must be readily available to all staff during their work shift via paper copy. Electronic access and other alternatives to maintaining paper copies of the SDS are permitted as long as no barriers to immediate access in each workplace are created by such options.

It is the responsibility of the designated hazard communication contact person or supervisor in each department to make sure the most recent SDS is present for review by staff. The format of the SDS was standardized per Federal regulations approved in 2012.

Manufacturers are expected to provide the SDS for their products. The SDS is typically also available on the product manufacturer/distributor web site.

Where employees must travel between workplaces during a shift, the safety data sheets may be kept at the primary workplace location. In this situation, staff in the field must be able to immediately obtain the required information in an emergency.

Employee Information and Training

All personnel must be supplied with information and training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new chemical hazard it introduced into their work area.

The following information must be provided to employees:

- The requirements of the Hazard Communication program.
- Any operations in their work area where hazardous chemicals are present.
- The location and availability of the written Hazard Communication program including the required list of hazardous chemicals and the safety data sheets for their work area.

Employee training must include the following:

- Methods and observations that may be used to detect the presence of a hazardous chemical in the work area.
- The physical, health, simple asphyxiation, combustible dust and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in their work area.
- The measures that employees can take to protect themselves from these hazards.
- The details of the hazard communication program including an explanation of the labels received on shipped containers and the workplace labeling system, the safety data sheet, including the order of information and how employees can obtain and use the appropriate hazard information.

Documenting Training

All training shall be documented in writing. The Hazard Communication Program Training Record is supplied for reference. Each Department is expected to provide the training for their personnel. EHS can be contacted for assistance with the technical aspects of the training.

Non-Routine Tasks

Periodically, employees may be required to perform non-routine tasks that involve the use of hazardous chemicals. Any employee engaging in such a task shall be provided training by their supervisor which covers the following:

- The specific hazards associated with the performance of the task.
- Protective measures that must be used.
- Measures that the department has taken to lessen these hazards (i.e. local exhaust ventilation, PPE)
- Specific emergency procedures to be used in the event of an accident or injury.

Appendix A: Hazard Communication Definitions

Chemical: any substance or mixture of substances

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

Exposure or exposed: 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.

Hazard Class: the nature of the physical or health hazards, e.g. flammable solid, carcinogen, oral acute toxicity.

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: 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: 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 hazardous chemical or to the outside packaging.

Label Elements: the specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

Physical Hazard: 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 (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas.

Pictogram: 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 for application to a hazard category. See Appendix 3 for specific pictograms.

Precautionary Statement: 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 of handling.

Pyrophoric Gas: a chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F or below.

Safety Data Sheet (SDS): written or printed material concerning a hazardous chemical that is prepared in accordance with the OSHA Hazard Communication Standard. Formerly known as a Material Safety Data Sheet.

Signal Word: 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 are “danger” and “warning.” “Danger is used for the more severe hazards, while “warning” is used for the less severe.

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.

Substance: 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 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 it composition.

Work Area: a room or defined space in a workplace where hazardous chemicals are produced or used and where employees are present.

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

Appendix B: Hazard Communication Site Specific Information Sheet

Hazard Communication Program (HCP)

Site Specific Information

The responsible party for a unit/area should complete this section to make the Hazard Communication Program site specific. The responsible party will ensure that the Hazard Communication Program is implemented, update the chemical inventory whenever a new chemical is acquired, review and update the site-specific information as necessary, provide and document training and ensure that Safety Data Sheets (SDS) are accessible to all affected workers during their normal work hours.

Date: _____ Department: _____

Building #:_____ Area/Room #: _____

HCP Responsible Party: _____

Location of SDS: _____

Location of Chemical Inventory: _____

Location of Training Records: _____

The SDS and chemical inventory are considered exposure records. At least one of these records must be maintained for 30 years following the chemicals last known use. Please note which records your Department maintains: SDS _____ Chemical Inventory _____
Location of records: _____

Emergency Procedures: _____
_____

Eyewash present? ___ No ___ Yes

Emergency Shower present? ___No ___Yes

Appendix C: Hazard Communication Pictogram Explanation Sheet

Health Hazard

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

Flame

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

Exclamation Mark

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

Gas Cylinder

- Gases Under Pressure

Corrosion

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

Exploding Bomb

- Explosives
- Self-Reactives
- Organic Peroxides

Flame Over Circle

- Oxidizers

Environment

- Aquatic Toxicity

Skull and Crossbones

- Acute Toxicity

Appendix D: University Chemical Inventory

NORTH CAROLINA AGRICULTURAL & TECHNICAL STATE UNIVERSITY

CHEMICAL INVENTORY

Building:

Room/Lab:

Department:

Inventory Supervisor:

Date of Inventory:

CHEMICAL NAME	MANUFACTURER	AMOUNT	QUANTITY (at time of inventory)		TOXIC, CORROSIVE, FLAMMABLE
			lbs., oz., mg, (dry)	ml, L, gal., (wet)	

CONTINUATION SHEET FOR CHEMICAL INVENTORY

CHEMICAL NAME	MANUFACTURER	AMOUNT	QTY (dry)	QTY (wet)	TOX/COR/FLAM