



**WESTERN NEW ENGLAND COLLEGE**

**ENVIRONMENTAL AND SAFETY COMPLIANCE**

# HAZARD COMMUNICATION PLAN

OSHA 29CFR 1910.1200

TO COMMUNICATE CHEMICAL HAZARDS

REVISED NOVEMBER 2009

# TABLE OF CONTENTS

	<b>PAGE(S)</b>
A. OVERVIEW	1
1. OBJECTIVES	
2. COVERED ACTIVITIES	
B. MAJOR PROVISIONS	1
C. EXCEPTIONS	1-2
1. EXCLUDED CHEMICALS	
2. LABORATORY ACTIVITIES	
D. COLLEGE PLAN	2-6
I. INTRODUCTION	
II. RESPONSIBILITIES	
III. MSDS	
IV. LABELLING	
V. LABELLING AT THE COLLEGE	
VI. INFORMATION AND TRAINING	
VII. NON-ROUTINE TASKS	
VIII. CHEMICAL SPILLS	
IX. CHEMICAL DISPOSAL	
X. EXPOSURES	
XI. OUTSIDE CONTACTORS	
F. CHEMICAL SAFETY	6-7
1. PROCUREMENT	
2. HAZARDOUS CHEMICALS	
3. STORAGE	
4. FLAMMABLE AND COMBUSTIBLE LIQUIDS	
5. COMPRESSED GASES	

# HAZARD COMMUNICATION

OSHA - 29CFR PART 1910.1200

## A. Overview

The Hazard Communication (HC) Standard of the Occupational Safety and Health Administration (OSHA) is designed to ensure that employees are made aware of the hazards associated with chemicals used in their work areas by giving them greater access to information on physical and health hazards, safe handling precautions, emergency procedures, and appropriate protective equipment (e.g. gloves, safety glasses, etc.)

As defined by the HC Standard, and for the purpose of this written program, the term “chemical” will refer to any chemical element or compound, or mixture of elements or compounds, which may or not be hazardous. Similarly, the term “hazardous chemical” will refer to any chemical element or compound, or, mixture of elements or compounds, that is determined to be hazardous (as defined by the HC Standard) by the manufacturer or importer.

## B. Major Provisions of the HC Standard

Chemical manufacturers and importers must evaluate the physical and health hazards of all chemicals they produce or import. Physical hazard is defined as a chemical which is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric (ignites spontaneously), unstable or water reactive. Health hazard is defined as a chemical which, based on available evidence, may cause acute or chronic health effects.

The manufacturer or importer must prepare, for those chemicals which they determine are hazardous, technical information for labels, and Material Safety Data Sheets (MSDS) in accordance with the requirements of the HC Standard. Labels must contain information about the identity and hazard of a chemical. MSDS sheets must provide more detailed information including Manufacturer information, chemical characteristics, hazards, exposure routes, handling precautions and emergency information for the chemical. The manufacturer or importer must provide both label and MSDS information to all employers or distributors purchasing hazardous chemicals.

All employers who use hazardous chemicals in their operations must develop a comprehensive hazard communication program to transmit information concerning chemical hazards to their employees. That program must include: a written description of how the employer will satisfy the requirements for container labeling and other forms of warning, employee access to MSDS, and employee training, and a list of all hazardous chemicals.

## C. Exceptions

The following HC Standard exceptions are applicable to the Western New England College HC Program:

1. The following “chemicals” are not covered by the requirements of the HC Standard.
  - Hazardous waste as defined by 40 CFR 260 or 310 CMR 30.
  - Tobacco and tobacco products.
  - Wood or wood products (exception does not include wood dust).
  - Articles, which are defined as manufactured items which have a function dependent upon their shape or design and which do not release or otherwise result in exposure to a hazardous chemical under normal conditions of use.
  - Consumer products, as defined by the Consumer Product Safety Act, when the employer can demonstrate that they are used in the workplace in the same manner as normal consumer use and that the workplace use results in no greater exposure than experienced by consumers.
  - Food, drugs, or cosmetics intended for personal consumption or use by employees while in the workplace.
  - Any drug defined by the Federal Food, drug, and Cosmetic Act which is in a solid form for direct administration to patients (e.g. pills).

2. Laboratories. This written HC Program does not apply to hazardous chemicals used in College “laboratories”. These “laboratories” comply with the regulations of the OSHA *Occupational Exposure to Hazardous Chemicals in Laboratories* Standard, 29 CFR 1901.1450, and the Western New England College Chemical Hygiene Plan. The term “Laboratories” is used generously around the WNEC campus to designate certain facilities, operations, or curriculum elements. Using the OSHA definition, the WNEC Chemical Hygiene Plan will cover the operational areas of all of the disciplines of the Science Department, the Physiological Psychology operations of the Psychology Department, and the “wet” laboratory (Sleith 219C) of the Biomedical and the Mechanical Engineering Departments.

## **D. COLLEGE HAZARD COMMUNICATION PROGRAM**

### **I. INTRODUCTION**

This written Hazard Communication Program describes how the requirements of the OSHA HC Standard will be implemented and includes, in a separate form, a list of the hazardous chemicals present in the workplace. This written HC Program is designed as a ready reference detailing the responsibilities of the College and of College personnel in effectively communicating the physical and health hazards of hazardous chemicals in the workplace, and is available to employees or their designated representatives upon request.

### **II. DESIGNATED RESPONSIBILITIES**

The following designated responsibilities play key roles in carrying out the HC program. Details of each function are described in subsequent sections.

**Environmental, Safety and Recycling Manager** will be responsible for the following:

- Maintain the Master File of Material Safety Data Sheets (MSDS) for the College. Paper copies of all MSDS will be maintained in CUB 205 and will be accessible through the Facilities Management Office during regular business hours and through Public Safety at all other times. Update this file as new revisions of existing MSDS are obtained.
- Maintain a duplicate MSDS file accessible to any computer on campus as an E-Binder at MSDS Online. [www.msdsonline.com/ebinder/wnewenglandc/](http://www.msdsonline.com/ebinder/wnewenglandc/)
- Generate a Master List of hazardous chemicals used at the College.
- Coordinate acquisition of MSDS with Procurement, Campus Post Office, and Departments.
- Maintain and Update this written HC Program as necessary.
- Supervise the labeling of secondary containers by developing a College standard, maintaining or preparing labels as needed, and by including labeling as a part of a training program for new and current employees.
- Develop and conduct training programs as needed for new or current employees and for supervisors who must introduce new employees to their work area or evaluate procedures for new chemicals.

**Department Heads and Chairpersons** in Administrative and Academic Departments or their designated Managers and/or Supervisors are responsible for the following tasks.

- Forward MSDS received in their department to the Environmental, Safety and Recycling Manager at CUB 204.
- Familiarize or have other Managers or Supervisors familiarize new employees with the hazardous chemicals present in their work area.
- Evaluate work procedures and safety protocols when new chemicals or procedures are introduced or non-routine tasks performed.

- Ensure that non-original containers are properly labeled according to this written program. Seek assistance from the Environmental, Safety and Recycling Manager if needed.
- Communicate potential hazards to outside contractors, temporary employees, work-study students, visiting faculty, and others temporarily working with hazardous chemicals in the Departments area of responsibility.

**Procurement** is responsible for requesting a MSDS for each chemical purchased for which a MSDS is not already on file. Upon receipt of any MSDS it should be forwarded to the Environmental, Safety and Recycling Manager. A notation should be added to the MSDS identifying the department or process using the chemical.

**Career and Human Resources** is responsible for the following tasks regarding new employees.

- Identify employee positions that require Hazard Communication Training.
- Conduct introductory HC training program as part of new employee orientation, using materials provided by the Environmental, Safety and Recycling Manager.
- Maintain a record of this training.
- Refer other requests by employees or managers on issues of hazard communication to the Environmental Compliance and Safety Manager.

**Public Safety** will provide emergency access to the MSDS master file through its computer access to MSDS Online or in the event of a power failure or other disruption of Internet service, through direct access to the Master file in CUB 205.

### **III. MSDS**

Material Safety Data Sheets (MSDS) are prepared by the Manufacturer or Importer of hazardous chemicals or chemical products. These MSDS are made available to purchasers of hazardous chemicals or chemical products by the Manufacturer or Importer. These purchasers must then make MSDS sheets available to employees using these chemical or chemical products as part of their employment. Supervisors or Department Managers should review or distribute MSDS sheets to employees prior to them using a chemical or chemical product as to ensure they understand the specific safety information. These MSDS sheets contain information on the ingredients, physical and chemical properties, physical and chemical hazards, emergency handling, transportation and disposal of chemical and chemical products. Reviewing these MSDS sheets prior to use will ensure that employees understand not only how to use the product safely, but how to respond in an emergency situation.

Employees or their designated representative(s) can access the list of hazardous chemicals on campus and print a copy of any MSDS in the Western New England College E-Binder. This is accessible from the Environmental Compliance and Safety Manager's web page through the College's Home Page. The site can also be bookmarked at [www.msdsonline.com/ebinder/wnewenglandc/](http://www.msdsonline.com/ebinder/wnewenglandc/)

If an MSDS is not found in the E-Binder for a chemical found on campus, notify the Environmental, Safety and Recycling Manager at [ecsoffic@wnec.edu](mailto:ecsoffic@wnec.edu). An equivalent MSDS may be on file or an internet search can be conducted to obtain the missing MSDS.

Alternatively, hard copies of MSDS sheets are maintained (by Building and or department) in the Environmental, Safety and Recycling files. Access to these records is during normal business hours.

### **IV. CONTAINER LABELING**

#### **Original Containers**

All of the hazardous chemicals arriving at the College should be labeled by their manufacturer or distributor as required by the OSHA Hazard Communication program. These labels may differ in format depending on whether they are DOT Shipping labels or Consumer Product Safety Commission consumer product labels. Regardless of the format used, these labels identify the source of the chemical as well as its identity or hazardous components and the health or physical hazard associated with the product. These labeling systems are described in the introductory training program given to all covered new employees as part of their orientation to the College.

## Non-original Containers

The above described labels must be maintained in readable condition. Should an original hazard label become illegible or obscured, one of the following options should be observed. These options may also be used when moving a hazardous chemical into a more useful container such as a spray bottle or other dispenser.

- A chemical can be poured into another container for the identical chemical that still retains its hazard label.
- A container may be obtained from the original manufacturer or another vendor that has a label for that same chemical. Some manufacturers will provide replacement labels or labels for standard dilutions of their products. For some common chemicals that are a single compound rather than a complex mixture replacement labels can be obtained from safety label vendors.
- Western New England College Labeling Standard. The final option is to create a new label using the College's labeling standard which is described below.

NOTE: The OSHA HC Standard provisions for labeling do not apply to three categories of chemicals used on campus

- Immediate Use Container: A chemical can be transferred to and used from an unlabeled container if:
  1. The chemical is to be used by or in the control of the person making the transfer, and all of the material is used or the used portion returned or labeled before the end of that employee's shift.
- Pipes: Pipes containing hazardous chemicals such as natural gas or steam need to be labeled only at their point of use. The remainder of the piping system does not have to be labeled under this program however any work which may affect the integrity of the pipes should be considered a non-routine task under the program.
- Chemicals under other Federal labeling standards:
  1. Pesticides labeled in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act.
  2. Food, food additive, color additive, drug, cosmetic, medical or veterinary device labeled in accordance with the Federal Food, Drug, and Cosmetic Act.
  3. Alcoholic beverage intended for non-industrial use labeled in accordance with the Federal Alcohol Administration Act.
  4. Consumer products labeled in accordance with the Consumer Product Safety Act.

## V. WESTERN NEW ENGLAND COLLEGE LABELING STANDARD

If a new label needs to be created for a chemical container it should contain the following minimum three items of information:

Identity of the chemical: This must be by chemical name (not formula or abbreviation) or by a trade name (including the manufacturer as well as the product name, example: **BUCKEYE Star Brite**).

Warning word: Such as, **DANGER**, **WARNING**, or **CAUTION** etc.

Type of Hazard: Such as **FLAMMABLE** or **OXIDIZER** for physical hazards or for health hazards (such as **CORROSIVE**, **IRRITANT**, **TOXIC**, or **POISON**), the type of hazard and target organ and route of entry if given on the original label. Examples of these statements would be: **IRRITANT to EYES and SKIN, POISON to LUNGS by INHALATION or INGESTION.**

Information for completing these labels can be found on the original label or on the MSDS for that chemical.

## **VI. INFORMATION AND TRAINING**

All new employees will receive a written summary of the College HC standard as part of their new employee package from Career and Human Resources. For new employees who will have hazardous chemicals in their work area, their Supervisor or Manager, along with the assistance of the Environmental, Safety and Recycling Manager (if requested) will complete the training by explaining the chemicals, hazards, and safety procedures involved in their work assignment. A separate program will be conducted for Supervisors and Managers by the Environmental, Safety and Recycling Manager. Newly hired Supervisors and Managers will go through this training as part of their initial orientation.

## **VII. NON-ROUTINE TASKS**

Non-routine tasks are temporary work assignments such as annual equipment cleaning, emergency repair, or testing a new procedure that also involves a new chemical, an infrequently used chemical, or an increased exposure to commonly used chemical. In these situations, the Supervisor or Manager giving the work assignment should evaluate the potential for an increased or unusual exposure to a hazardous chemical and make sure the employee(s) take proper protective precautions. Information for this process can be obtained from any instructional publications from the equipment or process supplier, inspection of container labels, or consulting a MSDS.

## **VIII. CHEMICAL SPILLS**

Spill involving chemicals or chemical products must be handled carefully. It should not be the practice of employees to immediately begin cleaning up a spilled chemical unless the employee recognizes that the following:

1. The chemical is non-hazardous
2. The spill is small and manageable
3. The spill is not directly to the environment
4. The spill has not entered any drain

If the employee is unsure of the chemical or chemical product or one of the above is not true then the employee should call Public Safety at X1411 or their immediate Supervisor. The Supervisor must call Public Safety immediately to begin the reporting process.

Public Safety will contact the Environmental, Safety and Recycling Manager and notify of the spill location. The Environmental, Safety and Recycling Manager will assess the spill for the following as to ensure proper clean-up.

1. Physical and Chemical Hazards of the Spilled Material
2. Size of the spill
3. Site Conditions (i.e. Ventilation)
4. Nature of the spill (i.e. contained or to the environment)

It is only at the direction of the Environmental, Safety and Recycling manager and provided the proper personal protective (at a minimum gloves and safety glasses) is used can the clean-up of spilled chemicals occur. It is the goal of the College to protect the health and safety of employees.

## **IX. DISPOSAL OF CHEMICALS**

Employees must contact their Departmental Manager or immediate Supervisor if they have a chemical or chemical product that requires disposal. This situation is likely to involve a chemical or chemical product which was not used to completion and will not be required for use again, prior to the chemical or chemical product reaching expiration or losing effective properties. The Manager or Supervisor must recognize that chemicals or chemical products may still contain hazardous properties even though they have been opened and used. A careful decision making process must be used to evaluate whether or not the chemical or chemical product can be disposed of down the drain or in the regular trash. In most cases at the College evaluating the chemical or chemical products MSDS sheet will provide enough information as to the proper disposal of the material. Evaluation of a materials flammability, toxicity and corrosivity are just a few of the items which need to be considered before disposing of a chemical or chemical product. The Environmental, Safety and Recycling Manager is available to assist in chemical or chemical product disposal operations. It is the goal of the College to ensure the proper disposal of a chemicals or chemical products used on Campus.

## **X. EXPOSURES**

Employee exposure monitoring be done if “the employee's exposure to any substance regulated by a standard which requires monitoring if there is reason to believe that exposure levels for that substance routinely exceed the action level (or in the absence of an action level, the PEL).”

At the time of this revision there are no apparent situations requiring exposure monitoring. Note that this is due in part to the availability and efficiency of engineering controls, and the observance of administrative controls. .

The College’s Environmental Compliance and Safety Manager will perform exposure monitoring in accordance with the OSHA Lab Standard:

- if he or she suspects potential exposure
- at the request of a member of the employee or
- at the request of the College Health Services.

Medical examinations and consultations will be done by the College Health Service unless the service is closed during an emergency situation.

## **XI. OUTSIDE CONTRATORS**

Outside contractors are responsible for the health and safety of their own employees. This may require that the contractor has access to the MSDS for College chemicals in their work area. Or a contractor may bring chemicals onto College property that may represent an exposure or potential exposure to College employees. In either case appropriate MSDS can be exchanged. This exchange should be done by the employee Supervisor or Manager. MSDS received from a contractor should be kept in the Department file with the source noted.

## **E. CHEMICAL SAFETY**

### **I. Procurement**

Chemicals or chemical products required by employees for task completion are purchased by the Department Manager. In some cases there is Departmental overlap and chemicals are ordered by the same Manager. This Manager understands the current inventory of Departmental Chemicals. The Manager is also the main contact for purchase orders and account numbers applicable to chemical ordering. Allowing a single person per Department to order chemicals ensures the College will minimize overstock and or order errors. This single point control also helps the College maintain compliance with:

- Hazard Communication Standard:** Proper labeling, MSDS obtainment, receiving and inventory of incoming chemicals.
- Chemical Storage:** The Proper storage of flammable/combustible materials, incompatible materials and or corrosive materials is necessary to ensure worker and student safety.
- Acutely Toxic Chemicals:** These chemicals are not allowed on Campus. Contact the CHO with questions or to find out what chemicals are considered Acutely Toxic.

### **II. Hazardous Chemicals**

Not all chemicals are hazardous. In fact, most chemicals used at the College are non-hazardous in nature. Hazardous chemicals are defined as those that exhibit either physical or health hazards on those utilizing them. Chemicals capable of producing physical hazards include explosives, flammables, oxidizers, peroxides and other unstable materials. Chemicals capable of producing health hazards include toxins, irritants, corrosives and carcinogens. Note that the manufacturers of chemicals are required to inform users of the physical and health hazards of their products. This is done through primarily through product labels and product MSDS Sheets. MSDS sheets are available in the Campus Utilities Building Room 204 during normal work hours and on-line at the College Environmental and Safety Compliance website anytime.

### **III. Hazardous Chemical Storage**

Properly storing chemicals is more than just ensuring they are located within a secured room and protected from

extreme temperatures. Care to ensure that there is no comingling of incompatible materials and that containers are properly labeled are vital to safe storage of chemicals. The following offers simple guidance on chemical storage.

- a) Store Chemicals in rooms isolated from work areas
- b) Storage areas should not have direct sun exposure on bottles
- c) Ensure all bottles are properly capped (with caps tightened) at the time of storage
- d) Store chemicals on shelves that are firm and sturdy
- e) Keep Inorganic materials from Organic Materials
- f) Separate Acids from Bases and provide secondary containment when necessary
- g) Store all flammable and combustible liquids in Flammable Cabinets
- h) Perform an evaluation to determine if chemicals are still needed on a regular basis

#### IV. Flammable and Combustible Liquids

When talking about laboratory safety of significant importance is the management of flammable and combustible liquids. Solvents, Alcohols, Stains and Petroleum Hydrocarbons are an important part of many products and therefore can be in any shop area. The safe storage, handling and usage of these materials will minimize the potential for accidents. It is important to understand that there are several different classes of flammable and combustible materials depending on applicable flashpoints and boiling points. A materials flashpoint (FP) is the temperature at which vapors are given off in sufficient concentration to support combustion in air. A materials boiling point (BP) is the temperature at which the vapor of the material is equal to atmospheric pressure. These chemical properties can be located within a particular substances MSDS sheet. The classes of flammable liquids are as follows:

- |    |            |                             |                   |
|----|------------|-----------------------------|-------------------|
| a) | Class IA   | <b>FP</b> <73(F)            | <b>BP</b> <100(F) |
| b) | Class IB   | <b>FP</b> <73(F)            | <b>BP</b> >100(F) |
| c) | Class IC   | 73(F) < <b>FP</b> < 100(F)  |                   |
| d) | Class II   | 100(F) < <b>FP</b> < 140(F) |                   |
| e) | Class IIIA | 140(F) < <b>FP</b> < 200(F) |                   |
| f) | Class IIIB | <b>FP</b> > 200(F)          |                   |

The storage of flammable and combustible liquids is highly regulated by the Springfield Fire Department. A very specific quantity of each flammable liquid class is permitted within buildings. Furthermore, all flammable liquids must be stored within flammable cabinets. Routine inspections of storage areas should be performed by Department Managers to ensure that flammable liquid storage is within regulations. If there are questions concerning the storage of flammables, please contact the Environmental, Safety & Recycling Manager.

The dispensing of flammable liquids is to be done only with proper ventilation and into approved containers. Currently only gasoline and diesel fuel are dispensed into proper portable fuel cans.

#### V. Compressed Gas Cylinders.

Any cylinder under pressure is considered hazardous. Even room air compressed into a cylinder has the potential to explode the cylinder or propel the cylinder and cause considerable damage and injuries. Other gases will compound this fundamental danger by releasing gases that might be flammable, toxic, or an asphyxiant. When a gas is released from pressure the cooling effect may cause frostbite. And the weight of the cylinder, empty as well as full can make them difficult to maneuver creating additional potential for injury or damage. For these many reasons, the following basic precautions should be observed:

- As with any hazardous chemical, every gas cylinder must have a label identifying its contents and the associated hazard. This label should be visible at all times.
- Use a hand truck to move cylinders that cannot be easily carried.
- All cylinders must be chained or strapped.
- The valve protection cap will remain on the cylinder until it is in its final position and ready to use.
- Use a regulator that is designed for that gas and cylinder valve. Inspect the regulator and associated hoses prior to use.