



# **HAZARD COMMUNICATION/ RIGHT TO UNDERSTAND PROGRAM (OSHA 1910.1200)**

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Revised February 2024

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## I. INTRODUCTION

In 1970, the United States Congress passed legislation creating the Occupational Safety and Health Administration (OSHA) to help preserve and protect the health and wellbeing of all employees in the United States. As a part of this continuing effort, the Hazard Communication Standard (HCS) was enacted. This specific legislation establishes the legal rights of employees to be informed about hazardous materials present on the job. As a result, employees are endowed with the “right to know” about the potential health risks, protective equipment and clothing, and the proper procedures for the handling, and storing of all chemicals and chemical products used in the workplace. Through employee training and education, employers such as Towson University hope to reduce the number of injuries or illnesses that can be attributed to the improper use and handling of these products. As of 2012, with the implementation of the Globally Harmonized System of Classification and Labeling Chemicals (GHS) through OSHA, the Employee Right-to-Know has been updated to the Employee Right to Understand.

It is the policy of Towson University (TU) to provide a safe workplace for its employees based on guidelines established by OSHA and the State of Maryland.

The Towson University Department of Environmental Health & Safety (EHS) has developed and implemented this program to assure that each of its employees receives the information and training they need so that they may work safely with hazardous chemicals found in the workplace. This program is the primary tool for providing hazard communication to our employees. It contains policy, guidelines, and procedures that determine how every aspect of the program is achieved.

This written program is based on the OSHA Hazard Communication Standard, Title 29 CFR 1910.1200 (Right to Understand – GHS), State of Maryland “Access to Information About Hazardous & Toxic Substances” COMAR 09.12.33 regulations, and additional requirements instituted by TU.

The components of the program are as follows:

- Introduction
- Program Management
- Participating Personnel
- Faculty/Staff Responsibilities
- Hazardous Locations
- Chemical Inventory
- Hazard Labeling
- Safety Data Sheets (SDS)
- Employee Training & Information
- Non-Routine Tasks
- Contractors
- Trade Secrets
- Documentation
- Quality Assurance/Program Evaluation

### ▪ DISTRIBUTION

The entire program is available for review at the EHS office, located in the Public Safety Building. Copies of the program will be provided to all employees and to other persons under special circumstances. An abridged version will be available online here: <https://www.towson.edu/public-safety/environmental-health-safety/documents/hazardcommunicationprogramrevised.pdf>

- QUALITY ASSURANCE AND UPDATES

If, at any time, employees have any questions or concerns about the program, they are encouraged to submit their comments in writing to the Program Coordinator in EHS. The Program Coordinator will acknowledge employee comments in writing. Comments will be evaluated, and appropriate action will be taken. In addition, this program will be evaluated annually. This program will be updated and revised as new information and data become available.

## II. PROGRAM MANAGEMENT

The Towson University Hazard Communication Program has a Program Coordinator with the authority to carry out its written requirements.

The objectives of the program are to:

- Eliminate illness and injury caused by chemical hazards;
- Ensure compliance with OSHA and MOSH regulations; and
- Ensure hazard information is communicated to employees who use chemical substances on campus.

EHS has been assigned the responsibility of implementing and maintaining the Hazard Communication Program, since this department already administers recordkeeping, medical surveillance, and training for TU employees. Therefore, TU has the following responsibilities to all of its employees:

- To compile and maintain an alphabetical Chemical Information List (CIL) of all regulated chemicals and chemical products used on campus. This list shall include the manufacturer's name, chemical name, common name, and location on campus.
- To ensure that the University has SDS for all regulated products in accordance with Federal and State regulations. In November 1985, all chemical product manufacturers were required by law to supply information regarding the safe use and handling of their products to all consumers. The result of this requirement was the development of Material Safety Data Sheets (MSDS), known today as Safety Data Sheets (SDS), per the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
- To develop and implement a written hazard communication program for the workplace, which outlines the University's program for meeting the requirements described in both the Federal and State regulations.
- To ensure that a label or other form of warning is legible, in English, and prominently displayed on all containers.
- To provide an employee training and education program designed to inform all faculty/staff about the existence and content of this law; the hazard communication methods used by the University including the CIL, SDS, identifiers and placards; the rights an employee may exercise under this program; and the procedures by which an employee may obtain a copy of the CIL and/or SDS.

### a. PROGRAM COORDINATOR

The primary Program Coordinator is the EHS Manager. The Program Coordinator is responsible for overseeing the total program as well as these specific duties:

- Coordinate program implementation

- Schedule/assign training for existing employees
- Conduct training for new hires, temporary, and contract employees
- Maintain all records and documentation generated by the program
- Address all comments concerning the program
- Conduct quality assurance audits on a scheduled basis
- File all reports with the appropriate government authorities
- Any other task affecting program maintenance
- Handle requests for CILs and SDS

b. OTHER KEY PERSONNEL

When the Program Coordinator is not in the office, another person must be available for questions and requests concerning the program. Two additional persons have been identified to assist the Program Coordinator with the responsibilities of the program. They are:

- EHS Assistant Director (1<sup>st</sup> alternate Program Coordinator)
- EHS Director (2<sup>nd</sup> alternate Program Coordinator)

One of the above-named personnel will always be available during operating hours for information regarding the program. Find the appropriate staff member here: <https://www.towson.edu/public-safety/environmental-health-safety/contact.html>

The Program Coordinator will have the responsibility for assuring that the program is properly managed and operated according to the guidance provided in the written program. This will be accomplished by a review of employee comments, safety records and QA audits.

III. PARTICIPATING PERSONNEL

Because of the nature of hazardous chemicals, it is the policy of TU to have all employees and contract personnel (as applicable) participate in the program.

For the purposes of this program, employees and work areas will be classified and grouped in order to better determine the level of participation and training employees will receive. University personnel are grouped in the following classifications:

- Academic & Auxiliary (PIs/LIs, Lab/Studio Managers, Support Staff, Print Shop Employees)
- Administrative (Office Employees, Management)
- Contractors
- Environmental Health & Safety
- Facilities Management (General Services, Grounds, Maintenance, Materiel Management, Trades-Electric, Painters, Vehicle, Plumbers, Engineering, etc.)
- Other Public Safety (Access Control, Key Shop, TUPD)

Work Areas at the University include:

- Administrative Offices
- Laboratories
- Maintenance Facilities (General Services, Landscape Services, Maintenance Shops & Closets, Power Plant)
- Print Shop
- Shipping & Receiving Areas
- Studios
- Other Hazardous Storage Areas

Because all personnel at one time or another must enter an area where hazardous chemicals are being used or stored, all personnel will participate in the program at some level.

#### IV. FACULTY/STAFF RESPONSIBILITIES

In order to ensure that this program is successful and in full compliance with the regulations governing it, all employees have the following responsibilities:

- To fully read the hazard warning label, chart, CIL, or SDS located in your work area.
- To ensure that a label or other form of warning is legible, in English, and prominently displayed on all containers in your work area.
- To carefully read and obey the warning labels on any containers.
- To contact EHS for copies of any SDS not found in your work area or inaccessible online.
- To follow the approved handling and use procedures for each product, especially those dealing with personal protective equipment and clothing.
- To attend all training sessions and/or complete all training modules.
- To notify EHS of new employees in their area who handle chemicals and should attend training.
- To ask your supervisor to contact EHS with any questions regarding this program or any chemical products in use in your area.
- To provide EHS with a copy of the SDS for any new products which you purchase and bring into the work area.
- To notify EHS of the amount and location of any new products which you purchase and bring into the work area.
- To regularly maintain chemical inventory in your area through the TU Chemical Inventory Database (CIDB).
- If an employee produces hazardous waste in their position, it is their responsibility to contact EHS and schedule and attend Hazardous Waste Generator training, which is separate from Hazard Communication training.

#### V. HAZARDOUS LOCATIONS

It is the policy of TU to identify and mark locations where hazardous chemicals are used, stored, or transported.

Hazardous chemicals can be found in the following locations:

- Administrative Offices
- General Services
- Laboratories & Studios
- Landscape Services
- Maintenance Shops & Closets
- Power Plant
- Print Shop
- Shipping & Receiving Areas
- Other Hazardous Storage Areas

See Appendix B for a campus map indicating these hazardous locations.

The Program Coordinator or his designee will physically audit chemical inventory locations as necessary.

#### VI. CHEMICAL INVENTORY

It is the policy of TU to list all of the hazardous chemicals used/stored at the campus through the CIDB.

TU utilizes numerous chemicals in the daily activities on its main campus and other campuses. These chemicals have been listed in the CIDB and can be reviewed at the EHS office, located in the Public Safety Building. Designated users may access chemical inventory list (CIL) through Vertere (with login information): <https://vertere.towson.edu/vimenterprise/Login.aspx>. However, copies of CIL will be made available for rooms requested by written request. An employee and/or their designated representative(s) have the right to access the CIL within one working day of receiving their written request (unless there is an emergency). Employees also have the right to one copy of the requested information or the means to make a copy, without charge, within five working days of written request.

As required, the Program Coordinator will review all submittals of new SDS to determine if any other chemicals have been added. If a new chemical has been added, the Program Coordinator will take the appropriate steps to revise the program and related documents.

During the 2014 legislative session, the General Assembly passed House Bill 189 which eliminated the requirement for an employer to submit a Chemical Information List (CIL) to Maryland Department of the Environment, effective October 1, 2014. There remains the requirement for an employer to develop a list of hazardous chemicals in accordance with 29 Code of Federal Regulations 1910.1200(e)(1)(i). The CIL will be submitted upon request to appropriate agencies as necessary.

## VII. HAZARD LABELING

TU will label all hazardous containers, as required, with the identity, hazard warning, and manufacturer for each hazardous chemical container on campus.

The program objective is to have all hazardous chemicals labeled. The chemical user is responsible for ensuring all chemicals are appropriately labeled within their area. The Program Coordinator will provide assistance as requested.

Any hazardous chemical containers used, stored, or transported at TU, shall contain identity, hazard warning, and manufacturer, at a minimum. All GHS-compliant labels will contain the following information:

- Product Identifier (Chemical/Common Name)
- Signal Word
- Hazard Statements
- Precautionary Statements
- Supplier Identification (Name, Address, Phone Number)
- Pictograms (GHS Hazard Symbols)

See Appendix C for a copy of the TU “Chemical Container Labeling” guidelines. If at some time a regulated chemical is introduced and used in the facility, it will be marked and labeled in accordance with OSHA regulations in addition to labeling required in this section. If the manufacturer’s label is not present or if a chemical is being used in a secondary (or portable) container not provided by the manufacturer, it will be labeled immediately. Secondary containers must comply with these labeling requirements if the following is true: 1) if the contents are not used within one shift by the individual who conducted the transfer, 2) this individual leaves the work area, 3) the container is moved to another work area and is no longer in possession by this individual. This label must contain two key pieces of information: the identity of the hazardous chemical(s) in the container (e.g., chemical name) and the hazards present. There are many ways to communicate this hazard information. See Appendix F for a sample label. For GHS label creation, the chemical user may follow the procedure for Chemwatch:

<https://jr.chemwatch.net/chemwatch.web/account/autologinbyip>.

All labels and information on labels shall be written in English. If at some time TU employs workers who are unable to read English, the information will be added to the label in the employee's native language.

Each new chemical received to campus should be recorded on a checklist. This checklist is to be forwarded to EHS for each new chemical received on campus. This log shall note date of receipt, contents, quantity, label check and initials.

For new hazardous chemicals received by TU employees as applicable, the item status shall be updated in CIDB to "In Use/Stored" and the Receive Date should be added. If CIDB is not used, each new chemical received to campus should be recorded on a checklist. This checklist is to be forwarded to EHS. This log shall note date of receipt, contents, quantity, label check, and initials.

The Program Coordinator or his designee will check container labels on a periodic basis. If the labeling is improper, corrective action shall be taken immediately. In addition, employees are trained to report to their supervisor if a container is found with inadequate labeling, so corrective action can be taken.

a. REGULAR CONTAINERS (drums, etc.)

When hazardous chemicals arrive at TU, the containers will be checked against purchase order records immediately for the following information:

- Product Identifier (Chemical/Common Name)
- Signal Word
- Hazard Statements
- Precautionary Statements
- Supplier Identification (Name, Address, Phone Number)
- Pictograms (GHS Hazard Symbols)

If the purchase order records verify the delivery, it will be accepted. Before being transferred to its destination, the labels shall be checked again to verify their adequacy. If the labeling is inadequate, then the proper identity and hazard label will be permanently affixed to the container. When this has been completed, the original labeling shall be removed or permanently covered to avoid confusion. Under no circumstances shall container labeling be removed or covered before the proper labels are attached.

b. TANKS AND REACTION VESSELS

All hazardous chemical containers shall have the labeling required under this section, including storage tanks, pipes, and reaction vessels where appropriate. Labeling on tanks and vessels shall be on permanently attached placards no less than one foot by one foot square. The labels shall be placed on the tanks and vessels at no higher than five feet and spaced horizontally every five feet for adequate viewing from all directions. Tanks and reaction vessels not labeled will have their contents discussed at employee training sessions.

c. PUMPS AND PIPES

All pumps and pipes used to transfer or transport hazardous chemicals will be labeled as appropriate. Pipes or piping systems that are not labeled will be discussed in employee training sessions as to their contents, potential hazards, and safety precautions to be taken. Unlabeled pipes may be found almost anywhere on campus, particularly in mechanical rooms, the University Power Plant, and areas where the Facilities Management personnel are assigned. In these work areas, employees can contact Facilities Management for further information.

#### d. TEMPORARY CONTAINERS

Outside of laboratories and studios, it is not usual University practice to use any other containers than the originals to transfer chemicals to storage or for use. However, if for any reason, another container, such as a bucket, drum, spray bottle, etc is used to temporarily store, use, or transport a hazardous chemical, it shall be labeled according to this section. Once its use has been completed, it must be cleaned, and the labels must be removed.

### VIII. SAFETY DATA SHEETS (SDS)

Accurate, up-to-date SDS shall be obtained, reviewed, and updated, if necessary, for each hazardous chemical used at TU.

The objective of SDS is to provide the user(s) with:

- Safe handling procedures
- Personal protective equipment/measures to be used
- Storage requirements
- Potential health hazards, if used incorrectly

TU relies on its chemical distributor, the manufacturer, or its database vendor to supply SDS. Towson University will ensure that the SDS meets the uniform 16-section format, if available. SDS shall be obtained prior to use of any hazardous chemical.

The Program Coordinator ensures that Towson University maintains SDS for hazardous materials on campus. Applicable SDS are available to all employees through the CIDB. **For Chemwatch:**

<https://jr.chemwatch.net/chemwatch.web/account/autologinbyip>.

This link is found on the TU EHS webpage, under the Safety Data Sheets header here:

<https://www.towson.edu/public-safety/environmental-health-safety/programs/chemical-safety-hazard/> and alternatively, may be found on the Chemistry Department webpage under the Laboratory Safety header here: <https://www.towson.edu/fcsm/departments/chemistry/resources/safety.html>

**For Vertere** (limited access, with login information): <https://vertere.towson.edu/vimenterprise/Login.aspx>.

The Program Coordinator is responsible for acquiring and updating SDS. The Program Coordinator contacts the chemical manufacturer or vendor if additional research is necessary, or if SDS has not been supplied with an initial shipment. A master list of SDS is available from the Program Coordinator through CIDB.

An employee and/or their designated representative(s) have the right to access Safety Data Sheets within one working day of a written request (unless there is a medical emergency). Employees also have the right to one copy of the requested information or the means to make a copy, without charge, within five working days of written request. SDS will be provided electronically upon request. For larger SDS requests, a chemical inventory list will be provided to the employee and/or their designated representative(s) who may access SDS via Chemwatch (links provided above). If Towson University fails to provide access to or a copy of the information about the hazardous chemical pursuant to the provisions of the law, an employee may refuse to work with the hazardous chemical. The employee, however, may not walk off the job or refuse to perform other duties while awaiting the requested information. Management cannot retaliate in any manner or willfully terminate the employment of any employee exercising their rights under this program.

#### a. NEW AND UPDATED SDS

When new or updated SDS are received, the chemical user will forward a copy to the Department of EHS for review of completeness. This review will be based on the requirements set in 29 CFR

1910.1200(g)(2)(i-xii). If it is determined to be incomplete, then a revision will be requested from the manufacturer.

First-time use of hazardous chemicals shall not commence until SDS has been received, approved, and distributed to the proper locations. Approved updates of SDS received from our distributors shall replace outdated (M)SDS at all locations.

SDS will be maintained in the same form as they are received from the manufacturer or distributor. They are filed alphabetically, according to their common/trade name at the EHS office, located in the Public Safety Building.

b. LOCATION/AVAILABILITY

All SDS for the University will be maintained at Department of Environmental Health & Safety (Public Safety Building).

Copies of site-specific SDS may be maintained at:

- Dean/Chairperson Offices (optional)
- Supervisor Offices (optional)

However, the master copy of SDS for all chemicals shall be maintained at the EHS office. These copies of the SDS shall be available to all employees or their designees during normal facility operating hours at the above locations.

c. FORMAT

Safety Data Sheets as required by OSHA per GHS will be in the following 16-part format (in order):

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

## IX. EMPLOYEE TRAINING AND INFORMATION

All employees (including temporary, onsite contractual and part-time) and contractors shall receive information on TU's Hazard Communication Program. It is the contractor's responsibility to train their employees in the Hazard Communication Program and its procedures.

The objective of employee training is to provide all personnel identified in this program with the necessary information and training to assist and abate the potential for injury, illness, or death resulting from the inadvertent exposure to hazardous chemicals utilized at TU.

All those persons who handle chemicals as a result of their job duties at Towson University are required to attend Hazard Communication training or watch the related training modules. Information and training will be provided based on job responsibility and risk. Employees must be trained on hazardous chemicals prior to their initial assignment to work with hazardous chemicals. Employees may receive up to four levels of instruction depending on the job and risk. These levels range from basic program information to hands-on materials handling training.

The departments are required to notify EHS of new employees in their area who handle chemicals and should attend training. It is the department's responsibility to notify EHS of new employees during the semester. EHS also requests a monthly new hire list from the Department of Human Resources (HR) to ensure that the campus departments do not miss newly hired employees who may handle chemicals. EHS contacts the individual or their department to find out if they handle chemicals during their regular job duties.

### a. TRAINING PROGRAM STRUCTURE AND CONTENT

Towson University distributes the Towson University Employee Safety Programs (ESP) manual to all employees. The ESP states that TU has a written program and employees shall receive training as required. Employees sign a form (in Appendix G and/or I) that they have received the ESP. These signed records are kept at EHS. A database of these signed records is also maintained by EHS.

Training is structured into four areas, identified as hazard communication training: HCT 1, HCT 2, HCT 3, and HCT 4.

#### 1. HCT 1

This is a general, but University-specific, program of orientation provided through the ESP. The ESP will be distributed to all TU employees through the link here: <https://www.towson.edu/public-safety/environmental-health-safety/documents/employeesafetyprogram-booklet-update.pdf> and shall include at a minimum:

- Chemical Inventory Information (such as CIL, Acquisition/Location)
- Contractor Responsibilities
- Hazard Communication Standard (Summary, Training Requirements)
- Hazardous Non-Routine Tasks
- Labels and SDS (Acquisition/Location, Description, Use)
- Program Coordinator and Alternates
- TU Employee Rights under the Standard
- TU Faculty and Staff Responsibilities
- TU Hazard Communication Training (Summary)
- TU Hazard Communication Program (Location, Link)
- TU Rights and Responsibilities under the Standard

#### 2. HCT 2

Instruction in this next level shall require designated personnel to complete Hazard Communication training. Topics to be discussed and explained shall include at a minimum:

- Review/discussion of the TU's Hazard Communication Program
- Physical and/or chemical health hazards of chemicals used, stored, or transported on campus
- Methods of recognizing release or presence of hazardous chemicals on campus
- Control methods used by TU to reduce risk of exposure during normal and emergency situations
- Specific chemical hazard information (chemical hazard classes)
- Procedures for dealing with spills and other abnormal releases of chemicals
- Proper handling and storage techniques (See Appendix H for a copy of Towson University's Chemical Storage Guidelines.)
- Special controls such as monitoring instrumentation and personal protective equipment (PPE)
- Labeling information and requirements including an explanation of the NFPA Diamond (See Appendix D and E).

### 3. HCT 3

Instruction at this level will consist of unique departmental training. The minimum instruction includes:

- Specific chemical operations instruction
- Chemical-specific emergency procedures such as spill clean-up and disposal techniques
- Specific chemical hazard information including review of specific SDS for hazardous chemicals utilized in the work area
- Control methods used to prevent contact with hazardous chemicals, such as personal protective gear
- Instruction on the use of personal protective equipment (PPE)

### 4. HCT 4

TU has identified training for the following non-routine task involving hazardous chemicals in its facility:

- Confined space entry and storage tank cleaning
- Swimming pool cleaning in Burdick Hall

The Maryland Fire and Rescue Institute (MFRI) [or other training agency as appropriate] conducts training for Confined Space Entry and Rescue. Facilities Management personnel conduct training for swimming pool cleaning. Additional training courses shall be developed for any additional non-routine tasks encountered. Training information will include (at a minimum):

- Protective/safety measures the employee can take;
- Measures that TU has taken to lessen the hazards, including ventilation, respirators, presence of another employee, etc.; and
- Emergency procedures.

### b. NEW HAZARD TRAINING

When new hazards are introduced into the workplace, training will be given to personnel at the highest level at which they have previously been trained.

c. RETRAINING

Employees shall be given refresher training as needed. If hazards change or if the employee changes job requirements, retraining may be necessary. If an accident or incident occurs, retraining will be required to ensure it does not happen again.

d. PERSONNEL TRAINING REQUIREMENTS

The following is a matrix defining what training is given to which group of employees. These training assignments are subject to change based on personnel or supervisor requests.

<u>Employee Group</u>	<u>Codes:</u>
Academic & Auxiliary	AA
Administrative	AD
Contractors	C
Environmental Health & Safety	EHS
Facilities Management	FM
Other Public Safety	PS

EMPLOYEE TRAINING STRUCTURE

Group Code	HCT 1	HCT 2	HCT 3	HCT 4
AA	X	X	X	
AD	X	X		
C	X	X		
EHS	X	X	X	X
FM	X	X	X	If applicable
PS	X	X	X	

e. TRAINING PROGRAM PRESENTATION

EHS will present HCT 1 and HCT 2 through an in-person training and/or video training module(s) (the latter in association with HR). The Program/Alternate Coordinators, or their designee, will conduct the training session. The department/section supervisor or manager will conduct HCT 3. SDS and personal protective equipment is also covered in HCT 2-4.

A complete lesson plan is attached to this program in Appendix F.

It is the responsibility of the Program Coordinator and EHS to maintain training records; however, HR will maintain personnel records along with training, with respect to video training modules.

X. NON-ROUTINE TASKS

When employees are required to perform hazardous non-routine tasks, such as cleaning tanks, entering our permit-required confined spaces, or cleaning out the swimming pool, a special training session will be conducted to inform them regarding the hazardous chemicals to which they may be exposed and the proper precautions to take to reduce or avoid exposure. See the Hazard Communication Training (HCT 4) section in Section IXa4 for training topics.

## XI. CONTRACTORS

Contractors are provided with one copy of the ESP. The president or most senior company member signs off that they have received the ESP and will distribute it to their employees. See Appendix I for a copy of the form that is signed by the Contractor. Contractors are required to comply with all of the programs listed in the ESP while on campus. See Appendix J for the Goldenrod Addendum to TU Contracts.

Each contractor bringing chemicals onsite must provide the Program Coordinator with the SDS, appropriate hazard information on these substances (including the labels used) and the precautionary measures to be taken when working with these chemicals at least 2 weeks before the chemical is used on campus.

## XII. TRADE SECRETS

It will be the policy of TU to request trade secret information on products being utilized on campus (as necessary) and provide that information to those requesting it under the existing regulations.

As the non-manufacturer of these materials, it will be necessary to request this information from the producer, in writing (unless there is a medical emergency) with reasonable detail as to why this information is being requested.

It will be the objective of TU to provide to the requesting individual(s) trade secret information pertaining to the hazardous chemical being utilized from the manufacturer. Additional details regarding obtaining trade secret information will be discussed on an individual basis with the personnel requesting it.

The Program Coordinator will review each request for trade secret information. It will be the responsibility of the Program Coordinator to determine University action on the subject.

## XIII. DOCUMENTATION

TU shall make the forms and documents listed in this program available to employees on a written request basis.

All of the following information is maintained on databases at EHS or through HR:

- a. Participating Personnel (EHS/HR)
- b. Employee Program Records (EHS/HR)
- c. Hazardous Locations (EHS)
- d. Chemical Inventory (EHS)
- e. Safety Data Sheets (EHS)
- f. Employee Information and Training (EHS/HR)

## XIV. QUALITY ASSURANCE

It is the policy and responsibility of TU to do whatever is necessary to assure the effectiveness of our Hazard Communication Program.

For program quality assurance, the program as a whole must be reviewed. This requires periodic review by members of EHS and random employee interviews.

It is the responsibility of the Program Coordinator to ensure periodic review is conducted. Ultimately, it is the responsibility of the President of Towson University to assure that this program is carried out.

APPENDIX A:  
TITLE 29 CFR 1910.1200 OSHA HAZARD COMMUNICATION  
STANDARD AND COMAR 09.12.33 ACCESS TO INFORMATION  
ABOUT HAZARDOUS & TOXIC SUBSTANCES

OSHA LINK:

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200>

COMAR LINK:

<http://mdrules.elaws.us/comar/09.12.33>

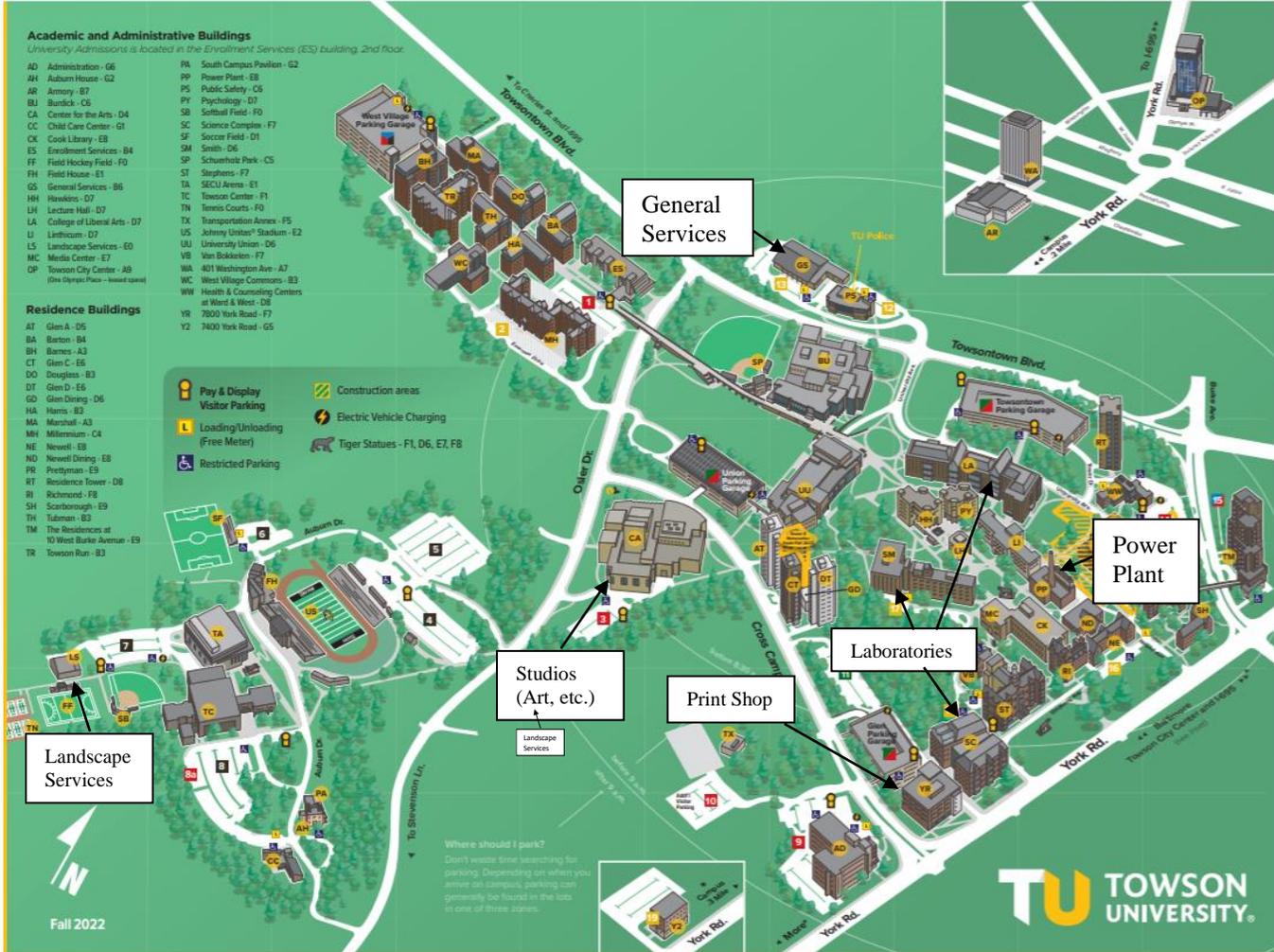
<http://mdrules.elaws.us/comar/09.12.33.01>

<http://mdrules.elaws.us/comar/09.12.33.02>

<http://mdrules.elaws.us/comar/09.12.33.9999>

# APPENDIX B: CAMPUS MAP WITH HAZARDOUS LOCATIONS IDENTIFIED

## HAZARDOUS LOCATIONS AT TOWSON UNIVERSITY



OTHER AREAS NOT HIGHLIGHTED ARE ADMINISTRATIVE OFFICES, MAINTENANCE SHOPS/CLOSETS, SHIPPING & RECEIVING, AND STORAGE AREAS THAT MAY CONTAIN HAZARDOUS CHEMICALS.

## APPENDIX C: CHEMICAL CONTAINER LABELING

**All** chemical containers must be labeled. The only exception is portable containers under the explicit control of the user at all times. If the container will be left alone for any reason, then it **must** be labeled.

Per the OSHA Hazard Communication Standard 29 CFR 1910.1200, the primary information on an OSHA-required label is the identity of the material, appropriate hazard warnings and the manufacturer:

1. **IDENTITY** - The identity may be a common or trade name ("Black Magic Formula"), or a chemical name (1,1,1,-trichloroethane). The identity is the term which appears on the label, the MSDS, and the list of chemicals, and thus links these three sources of information.
2. **HAZARD WARNING** - The hazard warning is a brief statement of the hazardous effects of the chemical ("flammable," "causes lung damage").
3. **MANUFACTURER** - Name and address of the chemical manufacturer, importer, or other responsible party.



Labels must be **legible**, and prominently displayed in English.

For GHS labels, the following is required:

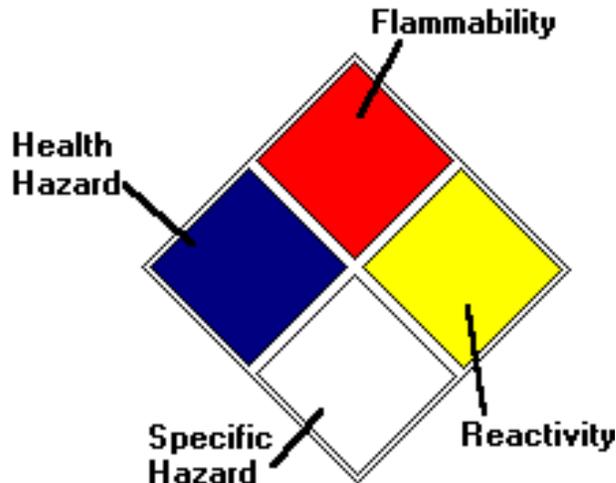
1. **Product Identifier** – The product identifier is the item name. The identity may be a common or trade name ("Black Magic Formula"), or a chemical name (1,1,1,-trichloroethane). The identity is the term which appears on the label, SDS, and the chemical list, thus linking the three sources of information.
2. **Signal Word** – The signal word indicates hazard level. Danger is used for severe hazards, Warning for lesser hazards.
3. **Hazard Statements** – The statements describe the nature of hazardous products and the degree of hazard. These are phrases found on the chemical SDS and are identified by H-Code (ex. H200).
4. **Precautionary Statements** – The statements relate to hazard statements and describe preventive, response, storage, or disposal precautions. These are phrases found on the chemical SDS and are identified by P-Code (ex. P100).
5. **Supplier Identification** – The supplier identification includes supplier name, and if available, address, and phone number. The supplier may be a manufacturer or vendor.
6. **Pictograms** – Pictograms display GHS Hazard symbols representing health, physical, and environmental hazards. The pictograms must be a black symbol on a white background, with a red frame.

Labels must be **legible**, and prominently displayed in English.

If you have any questions, please contact Environmental Health and Safety at 410-704-2949.

# APPENDIX D: NFPA LABELING SYSTEM

This is an example of a typical NFPA label. This system uses colors to represent the kind of hazard. Rating numbers are defined below.



## Health Hazard (Blue)

- 4 - Materials that on very short exposure could cause death or major residual injury even though prompt medical treatment was given (example: Acrylonitrile, Bromine, Parathion).
- 3 - Materials that on short exposure could cause serious temporary or residual injury even though prompt medical treatment was given (examples: Aniline, Sodium hydroxide, Sulfuric acid).
- 2 - Materials that on intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical treatment was given (examples: Bromobenzene, Pyridine).
- 1 - Materials that on exposure would cause irritation but only minor residual injury even if no treatment was given (examples: Acetone, Methanol).
- 0 - Materials that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.

## Flammability (Red)

- 4 - Materials that: (a) rapidly or completely vaporize at atmospheric pressure and normal ambient temperatures and burn readily, or (b) are readily dispersed in air and burn readily (examples: 1,3-Butadiene, Propane, Ethylene oxide).
- 3 - Liquids and solids that can be ignited under almost all ambient temperature conditions (examples: Phosphorus, Acrylonitrile).
- 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur (examples: 2-Butanone, Kerosene).
- 1 - Materials that must be preheated before ignition can occur (examples: Sodium, Red phosphorous).
- 0 - Materials that will not burn.

## Reactivity (Yellow)

- 4 - Materials that in themselves are readily capable of detonation or of explosive decomposition or reaction at normal temperatures and pressures (examples: Benzoyl peroxide, TNT, Picric acid).
- 3 - Materials that: (a) in themselves are capable of detonation or explosive reaction but require a strong initiating source, or (b) must be heated under confinement before initiation, or (c) react explosively with water (examples: Diborne, Ethylene oxide, 2-Nitropropane).

- 2 - Materials that: (a) in themselves are normally unstable and readily undergo violent chemical change but do not detonate, or (b) may react violently with water, or (c) may form potentially explosive mixtures with water (examples: Acetaldehyde, Potassium).
- 1 - Materials that are normally stable but which can: (a) become unstable at elevated temperatures, or (b) react with water with some release of energy, but not violently (example: Sulfuric acid)
- 0 - Materials that in themselves are normally stable, even when exposed to fire, that do not react with water.

Specific Hazard (**White**) - This field designates special information about the material.

OX - Denotes materials that are oxidizing agents. These chemicals give up oxygen easily, remove hydrogen from other compounds or attract negative electrons.

W - Denotes materials that are water reactive. These chemicals undergo rapid energy releases on contact with water.

If you have any questions, please contact the Department of Environmental Health & Safety at 410-704-2949.

# APPENDIX E: SAMPLE LABEL FOR USE FOR PORTABLE CONTAINERS

 TOWSON UNIVERSITY

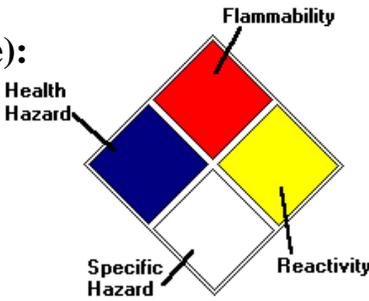
**IDENTITY:**

**HAZARD WARNING (Circle one):**

FLAMMABLE	COMBUSTIBLE
IRRITANT	TOXIC/POISON
OXIDIZER	CORROSIVE
OTHER:	

**MANUFACTURER:**

Contact EHS @ 410-704-2949 for more info or the MSDS



### The Basic Parts of A GHS-Compliant Label

**1** → **n-Propyl Alcohol**

UN No. 1274  
CAS No. 71-23-8

**2** → **DANGER**

**3** → Highly flammable liquid and vapor. Causes serious eye damage. May cause drowsiness and dizziness.

**4** → Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing fumes/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present. Continue rinsing.

Fill Weight: 18.65 lbs.      Lot Number: B56754434  
Gross Weight: 20 lbs.      Fill Date: 6/21/2013  
Expiration Date: 6/21/2020

**5** → Acme Chemical Company • 711 Roadrunner St. • Chicago, IL 60601 USA • www.acmechem.com • 123-444-5567



**6** ←

See SDS for further information.

1. **Product Identifier** - Should match the product identifier on the Safety Data Sheet.
2. **Signal Word** - Either use "Danger" (severe) or "Warning" (less severe)
3. **Hazard Statements** - A phrase assigned to a hazard class that describes the nature of the product's hazards
4. **Precautionary Statements** - Describes recommended measures to minimize or prevent adverse effects resulting from exposure.
5. **Supplier Identification** - The name, address and telephone number of the manufacturer or supplier.
6. **Pictograms** - Graphical symbols intended to convey specific hazard information visually.

# APPENDIX F:

## TRAINING LESSON PLAN

### HAZARD COMMUNICATION RIGHT TO UNDERSTAND TRAINING OUTLINE

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- I. Introduction (About 2 minutes)
- II. Hazard Communication Basics (About 6 minutes)
- III. Revised Hazard Communication Standard – the Right to Understand (About 3 minutes)
- IV. Label Requirements for Hazardous Chemicals (About 13 minutes)
- V. Final Assessment (About 2 minutes)

#### Section I Introduction

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- Hazard Communication Standard (HCS)
  - Employee Rights
  - University Responsibilities
- Justification for Hazard Communication
  - Chemical exposure effects
  - Understanding hazards and how to protect yourself and others

#### Section II Hazard Communication Basics

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- Description of Hazardous Chemicals
  - Examples of Hazardous Chemicals commonly found on campus
- Federal Agencies responsible for regulating chemicals
  - Exceptions to HCS labeling
- Hazard Communication Program
  - Employer Responsibilities
  - Employee Responsibilities
  - Product Labels
  - Safety Data Sheets
- Familiarization with Work Chemicals and Information
  - Don't Put Yourself at Risk/Know The Hazards
  - Use Your Training
  - Proper Chemical Handling

#### Section III Revised Hazard Communication Standard – the Right to Understand

---

- The Right to Understand
  - Scope
  - Globally Harmonized System (GHS)
  - Hazard Communication Standard Revisions

#### Section IV Label Requirements for Hazardous Chemicals

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- Product Label
  - Revised Hazard Communication Standard Label Requirements and Flexibility
  - Main Types of Labels
  - GHS Requirements
  - HCS Pictograms, Hazard Classes and Categories
  - Other Labels

- Trainee must answer each question.
- Trainee must answer 80% correctly to pass.

# APPENDIX G: EMPLOYEE TRAINING VERIFICATION

Please print:

Name: \_\_\_\_\_ Department: \_\_\_\_\_

Title/Job: \_\_\_\_\_

I attended a training session/watched a training module on the University's Hazard Communication Program at the time and date listed below. This training included:

1. A summary of the OSHA Hazard Communication Standard.
2. My rights as an employee under the law.
3. The location/access to the Chemical Information List and SDSs (CIDB Training Session).
4. Explanations of the proper methods of handling the chemicals with which I work.
5. Various types of chemical hazards which may be present in my workplace.
6. An assessment quiz for my understanding on the subject matter.

I also received a copy of the Hazard Communication Program pamphlet for Towson University.

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Employee SSN #

\_\_\_\_\_  
Instructor

\_\_\_\_\_  
Date and Time

This information is collected for documentation purposes only. Failure to provide this data may result in improper identification of the individual participating in the activity. This information may be inspected, amended, or corrected by contacting the Department of Environmental Health & Safety. This information is generally not available for public inspection. It will be shared only with other departments at Towson University, the University System of MD, the State of Maryland, the U.S. federal government, and with other entities permitted by law and/or as authorized by you.

# APPENDIX H: PROCEDURES FOR THE SAFE STORAGE OF CHEMICALS

LINK:

<https://www.towson.edu/public-safety/environmental-health-safety/documents/chemicalstorageguidelinesupdated.pdf>



To: University Contractors  
 From: Department of Environmental Health & Safety  
 Re: Employee Safety Programs Manual & Campus Asbestos  
 Containing Material (ACM) Locations

Towson University, in its commitment to the preservation of employee health and safety, is providing on-line for your reference the following documents. They can be accessed/viewed/downloaded from the Department of Environmental Health & Safety website at: <https://www.towson.edu/public-safety/environmental-health-safety/documents/employeesafetyprogram-booklet-update.pdf>.

Department of  
 Environmental Health &  
 Safety

Towson University  
 8000 York Road  
 Towson, MD 21252-0001

t. 410 704-2949  
 f. 410 704-2993

**1. Employee Safety Programs Booklet**

This booklet is being provided to you for use while your employees are working at our facilities. Since many of your employees work in the same areas as university personnel, there is the same level of exposure for both groups.

**REMINDER: IT IS THE RESPONSIBILITY OF ALL UNIVERSITY CONTRACTORS TO PROVIDE TO EHS WITH SAFETY DATA SHEETS (SDS) FOR ANY HAZARDOUS CHEMICAL UTILIZED AT THIS CAMPUS.**

**2. Campus Asbestos Containing Material (ACM) Locations**

This list is intended to be a guidance document only. It is substantially complete. However, the purpose is to inform and alert personnel to known locations of ACM and thereby avoid accidental disturbance and reduce the potential for fiber release episodes.

It is your responsibility to review and discuss the information contained in these documents with all of your employees. Please keep a copy available on location for use by your employees. Should you have any questions or concerns, please contact the Department of Environmental Health and Safety (410-704-2949).

Please sign the bottom of the form and return a copy with the original signature to EHS.

I, the undersigned, acknowledge it is my responsibility to review the above information in its entirety; to familiarize myself and other company employees with the contents.

NAME (PRINT)	SIGNATURE	DATE
COMPANY	TITLE	

11:03 HAZARD COMMUNICATION STANDARD

- A. The Contractor will be responsible for advising all of its employees of their rights under Towson's Hazard Communication Standard Program, or more commonly referred to as the Right To Know (RTK) Program. The University will supply the vendor with a reproducible copy of the TU Employee Safety Program (ESP) booklet, which outlines this program. The Contractor is responsible for distributing a copy of Towson's ESP booklet to its employees. The Contractor must provide written documentation to the Department of Environmental Health and Safety that each and every employee who physically works on campus has received a Towson ESP booklet and has been trained in his/her rights and responsibilities pursuant to the Program. The Owner, President or other most senior Company/Corporate Officer will sign and return written verification to EHS stating that he/she will adhere to the requirements specified above. The University's Department of Environmental Health and Safety is responsible for administering the University's RTK program and will handle all information regarding this program. Failure to adhere to the requirements of the RTK Program may result in implementation of punitive action such as the cancellation of the contract(s).
- B. Pursuant to the provisions of the RTK Program, the Contractor will be responsible for the following:
1. Submission to the Contract Services Office and EHS of the manufacturer's Safety Data Sheet (SDS) for all chemicals or chemical products to be used or in use at the University. These SDS must be delivered no later than two (2) weeks prior to the start of any work under this contract. There must be an SDS for every product in use or present on the campus unless exempted in writing by EHS. SDS for any changes or additions to the complete campus chemical list must be submitted five (5) working days prior to the actual change occurring. All proposed changes must be approved in writing by EHS prior to the actual use of the new product on campus. The University, through EHS, reserves the right to order a change in the use, storage, or method of handling of any chemical/chemical product that it feels poses an unreasonable hazard to the University's community.  
  
NOTE: In the absence of the original manufacturer's SDS, EHS will accept a generic equivalent as long as a letter from the Contractor stating that the original is not available is attached.
  2. The Contractor must warrant in writing to Towson University's Contract Administrator in the Procurement Department that all employees have been trained and will continue to be trained in the proper and safe storage, handling, use and disposal of all chemicals/chemical products in use.
  3. The Contractor agrees to obey and follow all local, state, and federal regulations regarding the storage, handling, use and disposal of all chemicals/chemical products. The Contractor agrees to properly dispose of all regulated waste in accordance with all applicable regulations and to make available to University's Contract Administrator all records necessary to support such activity.

11:04 ASBESTOS

- A. The Contractor is responsible for training and equipping all personnel concerning work in an asbestos environment as applicable. They must be trained as prescribed by COMAR 26.11.21. All new employees must be trained within 30 days after the Contractor hires them. This is to be accomplished at no additional cost to this contract or the University. An initial report on all employees as to their asbestos training will be presented to the University's Contract Administrator within the first 90 days of the Contract and updated on a monthly basis. Thereafter, failure to comply with this requirement would place the Contractor in default status.

## I. CIDB User Instructions for GHS Label Printing

### A. Access Chemwatch

#### 1. Access through Environmental Health & Safety webpage

a) In order to access the Chemwatch website:

- i. Go to <https://www.towson.edu/public-safety/environmental-health-safety/programs/chemical-safety-hazard/>. This will take you to the Environmental Health & Safety Office website, specifically the Chemical Safety & Hazard webpage.
- ii. Under the Material Safety Data Sheets header, click on the Chemwatch link.

#### 2. Access through Chemistry Department webpage

a) In order to access the Chemwatch website:

- i. Go to <https://www.towson.edu/fcsm/departments/chemistry/resources/safety.html>. This will take you to the Chemistry Department website, specifically the Laboratory Safety webpage.
- ii. Under the Material Safety Data Sheets (MSDS) header, click on the Chemwatch link.

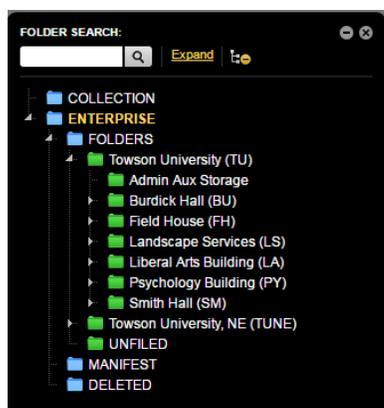
### B. Printing Labels

#### 1. Navigation & Printing

- a) Go to the D-Gen Lab. In Search, click the Own radio button.
- b) Go to the folders list. Click next to ENTERPRISE, click next to FOLDERS, then click next to the Towson University folder, as shown in Figure 2.



**Figure 1.** The left figure displays the search panels and menus on the Chemwatch home page.

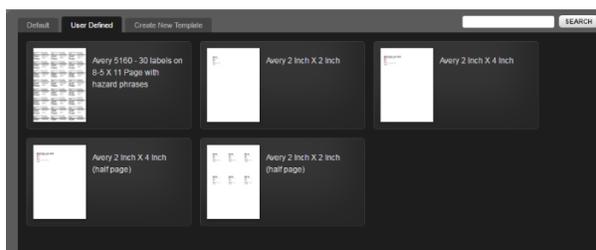


**Figure 2.** The right figure lists MSDS folders, organized by location down to room level.

- c) Select the location folder by clicking next to subfolders until you get to the room level of choice. Click on the appropriate room location folder. This will display a list of MSDS available for that room.
- d) Click the Add to List button next to each item on the right. You may select multiple items within the same room or from different rooms by repeating Steps 3c-3d between items.



- e) Click the Gallery icon at the top center of the page.
- f) Click on the User Defined tab. This will display GHS label templates as shown in Figure 3:
  - i. *“Avery 2 Inch X 4 Inch” for single item (uses Avery labels, Product Number 60505)*
  - ii. *“Avery 2 Inch X 2 Inch” for single item (uses Avery labels, Product Number 60506).*
  - iii. *“Avery 2 Inch X 4 Inch (half page)” for multiple items (uses Avery labels, Product Number 60505). Produces 5 labels.*
  - iv. *“Avery 2 Inch X 4 Inch (half page)” for multiple items (uses Avery labels, Product Number 60505). Produces 6 labels.*

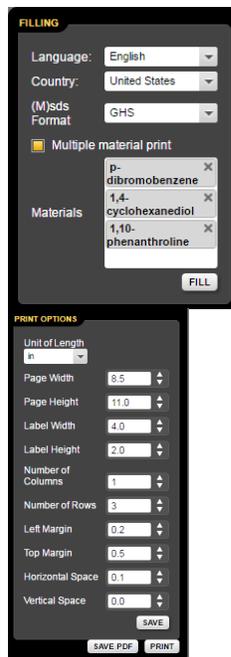


**Figure 3.** The figure displays several choices of User Defined label templates, four GHS templates in all.

- g) Select the appropriate label size by clicking the Go arrow in the lower right of the appropriate label template panel. **Note:** Make

sure that the appropriate size and amount of labels are properly loaded into your printer.

- h) Scroll up and click the Print icon  on the upper right.



The image shows two panels from a software interface. The top panel, titled 'FILLING', contains dropdown menus for 'Language' (English), 'Country' (United States), and '(M)SDS Format' (GHS). There is a checked checkbox for 'Multiple material print' and a 'Materials' list with items: 'β-dibromobenzene', '1,4-cyclohexanediol', and '1,10-phenanthroline'. A 'FILL' button is at the bottom right of this panel. The bottom panel, titled 'PRINT OPTIONS', has a 'Unit of Length' dropdown set to 'in'. It features several numeric input fields with up/down arrows: 'Page Width' (8.5), 'Page Height' (11.0), 'Label Width' (4.0), 'Label Height' (2.0), 'Number of Columns' (1), 'Number of Rows' (3), 'Left Margin' (0.2), 'Top Margin' (0.5), 'Horizontal Space' (0.1), and 'Vertical Space' (0.0). At the bottom are 'SAVE PDF' and 'PRINT' buttons.

**Figure 4.** The left figure displays the Filling panel, which lists the content options for the labels being printed.

**Figure 5.** The right figure displays the Print options panel, which controls the amount and dimensions of labels printed.

- i) For printing single items:
- Click the Fill button (Figure 4). This will render a layout of what the labels will look like (without borders). Check for accuracy and proceed to Step B1k.
- j) For multiple items:
- In the Filling panel, click the Multiple material print checkbox.
  - Click in the blank space within the Materials field multiple times, and select the items that pop up until all of the appropriate chemicals are selected.
  - Click the Fill button (Figure 4). This will render a layout of what the labels will look like (without borders). Check for accuracy and proceed to Step B1k. **Note:** If desired, you may change the Number of Columns or Number of Rows in the Printing Options panel, in order to match the number of labels needed. Labels will always be left/top oriented, meaning any changes made to the # of columns or rows will be with respect to the top left corner of the page.

k) Click the gray Print button (Figure 5). **Note:** You may also press the Save PDF button, if desired to save the label file or send to another user.

l) Click the PDF Print icon  in the upper right corner.

m) Next, make sure you are printing the number of pages needed with the appropriate printer, and click the Print button.

## C. Label Display Adjustments

### 1. Item name adjustment

a) Labels are printed by pulling information from the respective item SDS. There will be a material name for the SDS of each item. If the listed material name differs from the Item Name in Vertere Enterprise, it will have a preferred name displayed below it. For some items, there will be SDS that cover multiple CAS # and may have multiple names, where a Preferred Name is listed as shown below in Figure 6.

b) In the special case that the material/preferred name does not match an item label to be printed:

i. Click the Home icon (Figure 1).

ii. Go to the **(M)SDS AND LABELS** panel and click the Labels menu.

iii. Navigate to the item of interest using Search (with Own radio button selected) or by going through location folders as suggested in Step B1b-B1c. This will list the item(s) of interest.

iv. Click its preferred name icon.  A pop-up displaying preferred name options will appear as in Figure 6.

v. Select the Print checkbox next to the appropriate preferred name and click the preferred name. This will substitute the appropriate material name.

vi. Then close the pop-up. If this is not done in this case, the appropriate item name may not be printed on the label.

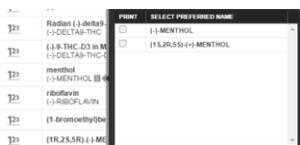


Figure 6.

c) When complete with adjustments, go back to Step B (Printing Labels).