

**University of Virginia  
(Agency 207)  
WRITTEN HAZARD COMMUNICATION PROGRAM**

Approvals:

\_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_ Date \_\_\_\_\_

Most Recent Review Date: 5/27/2014

Next Review Date: 5/27/2015

**I. Introduction**

The OSHA Hazard Communication Standard was promulgated to ensure that all chemicals would be evaluated and that information regarding the hazards would be communicated to employers and employees. The goal of this standard is to reduce the number of chemically related occupational illnesses and injuries.

In compliance with the Hazard Communication Standard ("Right-to-Know") (29 CFR 1910.1200), the scope of this written program applies to University of Virginia faculty, staff, and students (hereafter, personnel) who may work with or be in proximity to hazardous chemicals or chemical products. In this document the University of Virginia (UVa) is defined as: UVa (agency 207) facilities located on the main grounds in Charlottesville, Virginia. Other University of Virginia facilities including the UVa Medical Center (agency 209) and satellite facilities will have their own separate written plans on file at their respective locations to comply with 29 CFR 1910.1200. Copies of this written program are readily available for review by any UVa faculty, staff or student member and can be obtained from the following locations:

Office of Environmental Health & Safety (EHS, 982-4911)

Office of Environmental Health & Safety web site: (<http://ehs.virginia.edu/ehs/ehs.chemicalsafety/chemicalsafety.html>)

Basic components of the program include:

- Definition of a Hazardous Chemical
- Hazardous Chemical Inventory List
- Safety Data Sheets
- Labels and UVa's Hazard Communication Signs
- Employee Information and Training
- Non-Routine Tasks
- On-Site Contractors
- Resources for Information
- Medical Information in the Event of an Exposure
- Hazardous Waste Disposal
- Shipping Hazardous Materials
- Program Review

## **II. Definition of a Hazardous Chemical**

OSHA defines a hazardous chemical as a substance for which there is statistically significant evidence, based on at least one scientific study, showing that acute or chronic harm may result from exposure to that chemical. A hazardous chemical is one which is classified as a physical or a health hazard, which now includes a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified. Any product or chemical, which could meet this definition, will have a Safety Data Sheet (SDS), which provides details on the hazards. A more appropriate definition of a hazardous chemical would be the following:

Any substance or mixture of substances which (i) is toxic, (ii) is corrosive, (iii) is an irritant, (iv) is a strong sensitizer, (v) is flammable or combustible, or (vi) generates pressure through decomposition, heat or other means, if such substance or mixture of substances may cause substantial personal injury or illness during or as a result of handling or use (this includes compressed gas cylinders).

## **III. Hazardous Chemical Inventory List**

Any area that uses hazardous materials should have an inventory list of the hazardous materials stored and used in that area. This list should be maintained by a faculty member, area supervisor, or their designee. EHS maintains a list of chemicals and chemical products known to be utilized at UVa available at:

<http://ehs.virginia.edu/ehs/ehs.chemicalsafety/chemicalsafety.inventory.html>

In areas where asbestos might be present (construction pre-1988), occupants may contact EHS to determine if and where asbestos is present.

In areas where lead paint might be present (construction pre-1978), occupants may contact EHS to determine if and where asbestos is present.

#### **IV. Safety Data Sheets (SDS)**

Safety Data Sheets (SDS) or formerly, Material Safety Data Sheets (MSDS) for the hazardous chemicals and chemical products used at UVa are available online at: <http://ehs.virginia.edu/MSDS> or <http://www.hazard.com>.

Individual laboratories or departments at UVa may choose to keep copies of their SDS in their respective areas, in hard copy or electronic form. If electronic, all personnel or visitors must be able to freely access. If one of these sites discovers a chemical or chemical product in their area for which there is no SDS available at either of the websites listed above, please contact EHS (982-4911) for assistance.

If an outside contractor needs access to a space, either:

1. The space must be decommissioned by EHS and designated by an official sign, ensuring that no hazardous materials are present, or
2. Facilities Management or occupants must provide access to SDSs (either via the EHS website, or [www.hazard.com](http://www.hazard.com) if the contractor does not have access to the UVa website, or a printed version if the contractor prefers a physical document).

#### **V. Labels and UVa's Hazard Communication Signs**

The Hazard Communication Standard requires that the manufacturer label original containers of hazardous chemicals. Labels must contain the following information:

1. Chemical identity.
2. Appropriate hazard warnings (i.e., pictures, symbols, words, or any combination thereof which convey the hazard(s) of the chemical(s)).
3. Name and address of the chemical manufacturer, importer, or other responsible party.

The updated Hazard Communication Standard following the adoption of the Globally Harmonized System will require manufacturers, as of June 1, 2015, to label original containers for hazardous chemicals with the following 6 elements

1. Chemical Identity
2. Hazard statement(s)
3. Precautionary statement(s)
4. Signal word
5. Pictogram(s)
6. Supplier identification

**SAMPLE LABEL**

**PRODUCT IDENTIFIER**

CODE \_\_\_\_\_  
Product Name \_\_\_\_\_

**SUPPLIER IDENTIFICATION**

Company Name \_\_\_\_\_  
Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Postal Code \_\_\_\_\_ Country \_\_\_\_\_  
Emergency Phone Number \_\_\_\_\_

**PRECAUTIONARY STATEMENTS**

Keep container tightly closed. Store in cool, well ventilated place that is locked.  
Keep away from heat/sparks/open flame. No smoking.  
Only use non-sparking tools.  
Use explosion-proof electrical equipment.  
Take precautionary measure against static discharge.  
Ground and bond container and receiving equipment.  
Do not breathe vapors.  
Wear Protective gloves.  
Do not eat, drink or smoke when using this product.  
Wash hands thoroughly after handling.  
Dispose of in accordance with local, regional, national, international regulations as specified.

**In Case of Fire:** use dry chemical (BC) or Carbon dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.

**First Aid**

If exposed call Poison Center.  
If on skin (on hair): Take off immediately any contaminated clothing. Rinse skin with water.

**HAZARD PICTOGRAMS**



**SIGNAL WORD**  
Danger

**HAZARD STATEMENT**

**Highly flammable liquid and vapor.  
May cause liver and kidney damage.**










**SUPPLEMENTAL INFORMATION**

**Directions for use**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Fill weight: \_\_\_\_\_ Lot Number \_\_\_\_\_  
Gross weight: \_\_\_\_\_ Fill Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

After December 1, 2015, distributors may not ship containers labeled by manufactures or importers unless it contains the GHS label. The following hazard pictograms and hazards associated are presented below. These will be displayed on both labels and SDS.

## HCS Pictograms and Hazards

<b>Health Hazard</b>  <ul style="list-style-type: none"> <li>■ Carcinogen</li> <li>■ Mutagenicity</li> <li>■ Reproductive Toxicity</li> <li>■ Respiratory Sensitizer</li> <li>■ Target Organ Toxicity</li> <li>■ Aspiration Toxicity</li> </ul>	<b>Flame</b>  <ul style="list-style-type: none"> <li>■ Flammables</li> <li>■ Pyrophorics</li> <li>■ Self-Heating</li> <li>■ Emits Flammable Gas</li> <li>■ Self-Reactives</li> <li>■ Organic Peroxides</li> </ul>	<b>Exclamation Mark</b>  <ul style="list-style-type: none"> <li>■ Irritant (skin and eye)</li> <li>■ Skin Sensitizer</li> <li>■ Acute Toxicity</li> <li>■ Narcotic Effects</li> <li>■ Respiratory Tract Irritant</li> <li>■ Hazardous to Ozone Layer (Non-Mandatory)</li> </ul>
<b>Gas Cylinder</b>  <ul style="list-style-type: none"> <li>■ Gases Under Pressure</li> </ul>	<b>Corrosion</b>  <ul style="list-style-type: none"> <li>■ Skin Corrosion/Burns</li> <li>■ Eye Damage</li> <li>■ Corrosive to Metals</li> </ul>	<b>Exploding Bomb</b>  <ul style="list-style-type: none"> <li>■ Explosives</li> <li>■ Self-Reactives</li> <li>■ Organic Peroxides</li> </ul>
<b>Flame Over Circle</b>  <ul style="list-style-type: none"> <li>■ Oxidizers</li> </ul>	<b>Environment (Non-Mandatory)</b>  <ul style="list-style-type: none"> <li>■ Aquatic Toxicity</li> </ul>	<b>Skull and Crossbones</b>  <ul style="list-style-type: none"> <li>■ Acute Toxicity (fatal or toxic)</li> </ul>

UVa faculty members, area supervisors, or their designees must ensure that all incoming containers of hazardous chemicals bear a label specifying:

1. Identification of the chemical in the container and identification of the hazardous component(s).
2. Appropriate hazard warnings (i.e., pictures, symbols, words, or any combination thereof which convey the hazard(s) of the chemical(s)).
3. Name, address and telephone number of the chemical manufacturer, importer or responsible party.
4. Labels may not be removed or defaced on incoming containers unless immediately replaced by an appropriate label or the container is empty.

When transferring chemicals or labelling newly synthesized chemicals, UVa faculty members, area supervisors, or their designees **MUST** ensure that all transfer or new containers of hazardous chemicals bear a label or labeling system that provides personnel with:

1. Identification of the chemical in the container.\*
2. Appropriate hazard warnings (i.e., pictures, symbols, words, or any combination thereof which convey the hazard(s) of the chemical(s)).

Labelling is not required for hazardous chemicals transferred from a labelled container into a portable container, provided the chemical is intended for immediate use by the person who performs the transfer.

*\*In laboratories where new compounds are synthesized in small quantities, the faculty member, area supervisor (or their designees) shall maintain a labelling system to identify the compounds.*

## UVa's Hazard Communication Signs


For the benefit of outside contractors, emergency personnel, or other visitors to an area, UVA provides a Hazard Communication Sign on each door. These signs (see below) designate all rooms/areas where hazardous materials are stored or used and provide hazard (see Symbol Hazard Warnings) and emergency contact information. The sign clearly indicates that anyone who has not been properly trained is not authorized in the area without an escort.

**LYNCH,**  
**CLARISSA**


Room(s): 234

**CAUTION!**  
ADMISSION TO AUTHORIZED  
PERSONNEL ONLY!


When lab personnel are present, enter ONLY as instructed.  
No Eating or Drinking except where posted by EHS.



Caution  
Radioactive  
Materials



FIRE  
D  
4 4  
HEALTH W REACTIVITY  
SPECIAL  
NFPA



BIOHAZARD  
BSL-2

Additional Room Information & Special Entry Requirements

- Typical quantity of flammable liquid stored in this room: **2 gallons**

**EMERGENCY CONTACTS**

1. 222-222-2222 (M-F) 8AM - 5PM (LYNCH, CLARISSA)
2. 222-222-2222 (After Hours) (LYNCH, CLARISSA)
3. Environmental Health & Safety: 434-982-4911
4. Emergency Operator: 434-924-2012

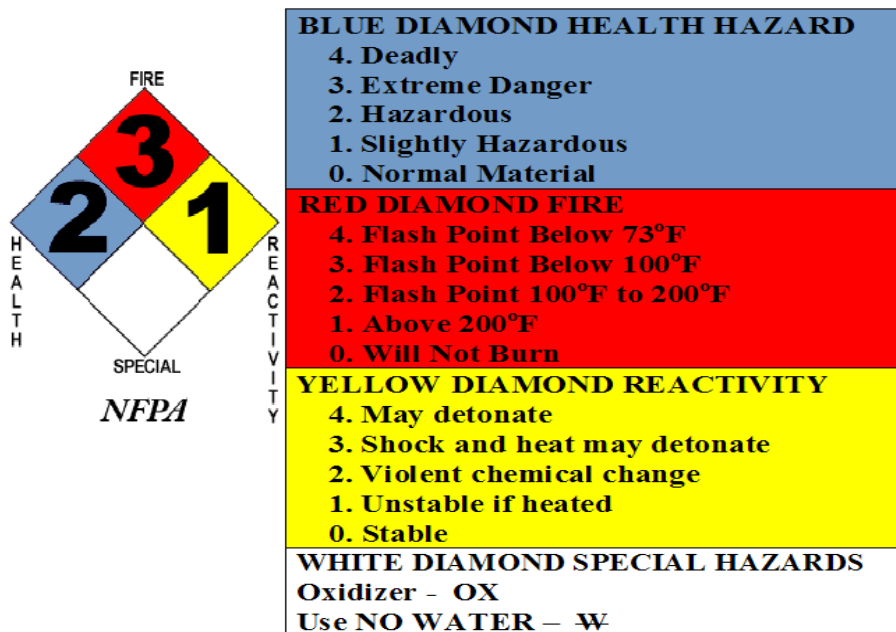
This "Hazard Communication Sign" was created on: 04/21/2014.

If you need a new sign or a copy of this "Hazard Communication Sign" call Environmental Health & Safety (434-982-4911). [Spec Mat Handling Fac /EHS - 234]



## Symbol Hazard Warnings

The National Fire Protection Association (NFPA) uses a symbol system designed as a diamond-shaped label containing four differently colored squares. A number (0-4) is added to each square indicating the order of hazard severity.



The image shows the NFPA Fire diamond symbol, a diamond shape divided into four colored squares: top (red), left (blue), right (yellow), and bottom (white). The top square contains the number 3, the left square contains 2, and the right square contains 1. The diamond is labeled with 'FIRE' at the top, 'HEALTH' on the left, 'REACTIVITY' on the right, and 'SPECIAL' at the bottom. Below the diamond is the NFPA logo. To the right of the diamond is a legend box with four sections: Blue Diamond Health Hazard, Red Diamond Fire, Yellow Diamond Reactivity, and White Diamond Special Hazards. Each section lists hazard levels from 0 to 4 with corresponding descriptions.

<b>BLUE DIAMOND HEALTH HAZARD</b> 4. Deadly 3. Extreme Danger 2. Hazardous 1. Slightly Hazardous 0. Normal Material
<b>RED DIAMOND FIRE</b> 4. Flash Point Below 73°F 3. Flash Point Below 100°F 2. Flash Point 100°F to 200°F 1. Above 200°F 0. Will Not Burn
<b>YELLOW DIAMOND REACTIVITY</b> 4. May detonate 3. Shock and heat may detonate 2. Violent chemical change 1. Unstable if heated 0. Stable
<b>WHITE DIAMOND SPECIAL HAZARDS</b> Oxidizer - <b>OX</b> Use <b>NO WATER</b> - <b>W</b>

The numbers in the NFPA Fire diamond do not represent an individual chemical, but represent the highest hazard of any particular chemical present in a space. **NOTE:** As of May 2011, the red diamond is gradually reflecting a letter rating, A-D, based on the total amount of flammable liquid in the space (See NFPA 45: Standard on Fire Protection for Laboratories Using Chemicals), where A indicates a high fire hazard, and D indicates a low fire hazard. The A-D rating will only appear on laboratory spaces.

The sign also indicates which rooms contain radioactive material or x-ray producing equipment, high magnetic fields, lasers, and/or biohazardous materials. The biohazardous rooms are ranked according to their severity, with a BSL-1 lab being less severe than a BSL-3 lab. These rooms should not be entered without an escort from the lab or prior approval from EHS.

Emergency contact information for each room is also provided on the bottom of the sign and should be contacted before entering an area.

Visitors to any room with a Hazard Communication Sign shall be escorted at all times by personnel familiar with the hazards of that room.

For renovations of laboratories, prior to outside contractors working in the area, the room must be decommissioned and cleared by EHS of all hazards with the possible exception of asbestos and lead paint. This will be represented by the following sign:

Unless this sign is present, with a signature(s), no outside contractor may enter the room.

DO NOT REMOVE THIS SIGN UNLESS YOU HAVE CONTACTED EHS AND BEEN GIVEN APPROVAL

# THIS ROOM HAS BEEN DECOMMISSIONED

If you need to use this room for activities that require the use of hazardous materials you are required to call EHS for a Hazardous Communication Door Sign to comply with State of Virginia Fire Marshal Regulations

**Please call EHS before starting any renovations**

University Policy **requires** a pre-renovation asbestos survey in buildings constructed prior to 1988, before disturbing **any** building materials

EHS has inspected this room. I certify that this room has been surveyed for radioactive materials, chemicals, sharps, and bio-hazardous materials and all surfaces were cleaned and all hazardous materials removed.

\_\_\_\_\_  
SURVEYOR'S SIGNATURE  
(EHS Representative)

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SURVEYOR'S SIGNATURE  
(Department Representative)

\_\_\_\_\_  
DATE

\_\_\_\_\_  
**Building**

\_\_\_\_\_  
**Room #**

Contact EHS at 982-4911 for more information

X:\Commissioning and Decommissioning\2012 Green room clearance sign.docx

In addition to renovations, anytime a laboratory with hazardous materials is being vacated due to a lab relocation or retirement, the room shall also be decommissioned and cleared by EHS and a department representative. Prior to new personnel occupying the space, EHS must be contacted for a Hazardous Communication Door Sign and any other applicable approval, such as protocol submission for biological or radioactive material activities. The green sign will be removed once a Hazardous Communication Door Sign can be posted.

## VI. Employee Information and Training

Prior to working in an area with hazardous materials, personnel must receive Hazard Communication training from EHS—titled Chemical Safety Training--(through classroom or online) or the supervisor(s) of the area. Personnel working with chemicals *and* generating **Hazardous (chemical) Waste** are to take the Chemical Safety and Waste training. A record of the Chemical Safety training and any additional training that is provided shall be kept in the individual's file by the supervisor or faculty member. All EHS provided training will automatically include an electronic record upon full completion, and access to your personal training records is readily available on the EHS website.



Supervisors will also provide any specialized training for using particular chemicals or chemical products, and where appropriate, how to use personal protective equipment, and maintain a record of this training. If you have any questions about a material or about your personal protective equipment, contact EHS (982-4911).

The Safety Training and Record-keeping (STAR) online application, found on the EHS webpage, is a tool to record completion of specialized training given by supervisors, or in teaching labs.

## **VII. Non-Routine Tasks**

Periodically, personnel may be required to perform hazardous non-routine tasks. Prior to starting work on such projects, affected personnel must report to their immediate supervisor to determine the hazards they may be exposed to during such activity and receive training regarding those hazards.

## **VIII. On-Site Contractors**

Often, one or more outside contractors (including those involved in renovations, installations, moving, landscaping, etc.) work on-site at UVA. Facilities Management Project Managers/Construction Managers or the supervisor of the work area can request EHS to decommission and remove all hazardous materials from an area, in which case clearance will be posted (see green sign above) and contractors can work in the area unless asbestos is present. The supervisor of the area shall contact EHS to determine if asbestos is present. If asbestos is the only hazard present they shall contact EHS to provide training/supervision to the contractor. For an area that cannot be cleared of all hazardous materials, Facilities Management Project/Construction Managers or the supervisor of the work area shall provide the on-site contractors with the following information prior to work beginning:

- A list of the hazardous materials to which the on-site contractors may be exposed and access to SDSs through the EHS website or [www.hazard.com](http://www.hazard.com) for contractors that do not have access to UVA's website or printed versions.
- Communicate precautions necessary to protect the on-site contractors from the listed hazardous materials during normal working conditions and foreseeable emergencies, which include:
  - Emergency contact information, location of SDSs, location of emergency equipment (eyewashes and safety showers), and labelling practices required by the University.
- Ensure that any outside contractors responsible for moving hazardous materials or shipping hazardous materials commercially are notified of the potential hazards and follow US Department of Transportation (DOT) regulations. If supervisors have not received the appropriate DOT training, they should contact EHS for assistance.
- Require the outside contractors to provide a list of hazardous materials and Safety Data Sheets (SDS) for the hazardous materials that will be brought onto the work site.
- Ensure that the lists of hazardous materials and corresponding SDS provided by the outside contractor are provided to the Office of Environmental Health and Safety in a timely manner.

**Laboratories** shall provide outside contractors with precautionary measures that must be taken. This may be accomplished by escorting the contractors and being present to answer all questions.

It is the responsibility of the escort to:

- Accompany the visitor or outside contractor through the space at all times
- Secure all hazardous materials prior to the visitor or outside contractor entering the space (this includes hazardous waste)
- Notify the visitor or outside contractor of potential hazards in the space
- Be available to answer any questions
- Stay in the immediate area while the visitor or outside contractor is working

Facilities Management Project/Construction Managers, supervisors of the work area, and/or contractors may receive assistance by contacting the Office of Environmental Health & Safety regarding hazardous materials and SDS.

## **IX. Resources for Information**

If there are any questions regarding the implementation of this Written Hazard Communication Program, or if any personnel would like further Chemical Safety information or assistance, the Office of Environmental Health and Safety will provide assistance.

## **X. Medical Information in the Event of an Exposure**

When working with hazardous chemicals, appropriate personal protective equipment shall always be utilized to prevent injury.

In the event of a chemical exposure, the injured person must seek medical attention in one of the following places (depending on the severity of the exposure):

- UVa WorkMed (1910 Arlington Blvd) for faculty or staff
- UVa Student Health (400 Brandon Ave.) for students
- UVa or closest Emergency Room (*if after hours or high degree of injury*)
- 911 (*if injured person cannot move or be moved*)

Chemical exposure incidents **MUST** be reported to the faculty member and/or supervisor in charge of the lab/area.

## **XI. Hazardous Waste Disposal**

When a hazardous material is of no further use and is to be discarded, it is likely subject to stringent EPA regulations. Since improper disposal can result in fines and jail sentences to personnel who violate and supervisors who condone violations of EPA regulations, UVa provides for the free collection and disposal of hazardous wastes.

**Hazardous (chemical) Waste and Radioactive Waste** **MUST** be labeled at all times, and **MUST** be kept closed at all times, except when filling\*. EHS provides containers, labels and chemical waste pick-up forms free-of-charge. Examples of these labels and proper usage can be found at: <http://ehs.virginia.edu/ehs/ehs.chemicalsafety.html>

To schedule a chemical waste pickup call 982-4911 or visit:  
<http://ehs.virginia.edu/ehs/ehs.chemicalsafety/chemicalsafety.cwc.html>

*\*The Virginia Department of Environmental Quality and the U.S. Environmental Protection Agency have cited facilities (including UVa) when open Hazardous (chemical) Waste and/or Radioactive Waste containers have been observed. The citation most often given is for "improperly disposing of Hazardous Waste" and/or for the "operating of a Treatment, Storage and Disposal Facility without the required permits".*

## **XII. Shipping Hazardous Materials**

Anyone who ships hazardous materials must have documented training regarding DOT (US Department of Transportation) shipping regulations. Improper shipping can result in fines and jail sentences to personnel who violate DOT regulations and supervisors who condone such violations.

Due to the regulatory nature of shipping hazardous materials, you are strongly recommended to contact EHS whenever you need to ship a chemical material or product of any kind; EHS will make your shipment for you. Please contact EHS at 434-982-4911 for more information and assistance.

## **XIII. Program Review**

The training program for new and current personnel will be reviewed as new regulations dictate and as deemed necessary by the Office of Environmental Health & Safety.

Supervisors who provide training through the use of any materials not provided by the Office of Environmental Health & Safety are responsible for the documentation of the training. Please refer to the EHS website for the online application called STAR- Safety, Training and Record-keeping. This application helps faculty and staff manage documentation of federally required training, in addition to training given directly by supervisors.

This Written Hazard Communication Program will be reviewed by the Office of Environmental Health & Safety annually, and updated as necessary.

Attached:

Appendix A: Chemical Inventory List Form

Appendix B: SDS Request Form

Appendix C: Chemical Safety Training Attendance Register

## Appendix A Chemical Inventory List Form

*Upon completion please return a copy to:*

Office of Environmental Health & Safety – UVA

ATTN: Chemical Safety Officer

Fax: (434) 243-1735 **OR** All Mail: P.O. Box 400322 Charlottesville, VA 22904-4322



**PLEASE PRINT**

DEPARTMENT: \_\_\_\_\_  
DATE OF REQUEST: \_\_\_\_\_  
REQUESTED BY: \_\_\_\_\_  
FAX #: \_\_\_\_\_  
MESSENGER MAIL ADDRESS: \_\_\_\_\_

**PLEASE PROVIDE THE FOLLOWING CHEMICAL INFORMATION**

CHEMICAL NAME: \_\_\_\_\_  
PRODUCT NAME: \_\_\_\_\_  
PRODUCT NUMBER: \_\_\_\_\_  
MANUFACTURER NAME: \_\_\_\_\_  
MANUFACTURER ADDRESS: \_\_\_\_\_  
MANUFACTURER CITY, STATE & ZIP: \_\_\_\_\_  
MANUFACTURER PHONE: \_\_\_\_\_

**IF MORE THAN 1 SDS IS NEEDED PLEASE USE SEPARATE SHEETS**

ADDITIONAL INFORMATION:

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Appendix C  
**Chemical Safety Training Attendance Register**

TYPE OF TRAINING: \_\_\_\_\_  
DEPARTMENT: \_\_\_\_\_  
DATE OF TRAINING: \_\_\_\_\_  
TRAINER: \_\_\_\_\_  
CONTACT NUMBER: \_\_\_\_\_

