

Hazard Communication Program

Purpose and Scope

The Purpose of the Hazardous Communication Program is to establish procedures for identifying hazards and communicating information to employees. West Chester University is committed to providing a safe and healthy work environment for each of its employees. This program establishes minimum safe procedure and guidelines for employees working with hazardous chemicals or materials.

All covered employees have a right to know the hazards in which they are working with and are expected to follow the requirements pertaining to Safety Data Sheet (SDS) review, training, labeling and safe chemical use as outlines in this program.

Responsibilities

Environmental Health and Safety

- Review the Hazard Communication Program annually and update as needed.
- Maintain and post annual updates to Hazardous Substance Survey forms.
- Maintain and coordinate MSDS online access, an electronic system for SDS management and employee right-to-know access.
- Provide technical assistance and guidance to departments and employees regarding hazardous material use, safe work practices, and protective measures.
- Provide Hazard Communication training and maintain training records.
- Monitor legal requirements for changes with respect to the Hazard Communication Program and regulated substances.
- Provide chemical and exposure information to employees and licensed physicians when needed for medical consultations and examinations.

Departments

- Ensure supervisors are carrying out prescribed safety procedures.
- Ensure up-to-date records are maintained on training of all employees required to handle hazardous chemicals.
- Contact EHS when initial plans are made to add/change the following systems (to ensure compliance OSHA, and EPA, and other regulatory requirements): ventilation, drains and piping, fire alarms, egress changes, safety equipment, chemical storage/use patterns.

Supervisors/Managers

- Be knowledgeable of the contents of this program and its application to their areas of responsibility.
- Ensure employees comply with all provisions of this program.
- Identify the hazardous materials in the work area and maintain a current chemical inventory.
- Ensure employees who handle, and store chemicals maintain Safety Data Sheets for each chemical in the inventory thought MSDS online.

- Ensure initial Hazard Communication training is provided to new employees and refresher (when new chemicals are introduced to the work area) training is provided to affected employees as needed.
- Provide on-the-job training to employees in safe handling of hazardous materials.
- Ensure each employee is provided with and use appropriate personal protective equipment.
- Consult with EHS when in doubt as to what protective measures to use.
- Make routine surveys of the work area to ensure proper labeling, clarity of labels and chemical handling.
- Take prompt corrective action when unsafe conditions or practices are observed.
- Contact EHS prior to introduction of new hazardous materials.
- In coordination with EHS, investigate the cause of any incident involving hazardous chemicals and implement corrective actions.

Employees

- Wear PPE and follow established safe work practices when working with hazardous materials.
- Attend all required safety training.
- Know where SDSs and chemical inventory are kept in the department/facility.
- Maintain Safety Data Sheets for each chemical in the inventory through MSDS online.
- Understand basic information provided on labels, SDSs, and warning signs.
- Know your role in emergency procedures.
- Know the emergency evacuation routes from the department/facility.
- When in doubt as to the safe and proper way to use equipment, or perform an operation, consult your supervisor.
- Store hazardous materials in properly designated areas segregated from incompatible materials.
- Do not remove or deface labels on chemical containers.
- Immediately inform your supervisor/manager of:
 - Any symptoms of overexposure possibly related to hazardous materials
 - Any work-related injuries or accidents
 - Missing labels on containers that you cannot correct
 - Malfunctioning engineering controls or safety equipment
 - A medical consultation or examination related to workplace chemical exposure

Procedures

Hazard Identification

Safety Data Sheets (SDS)

SDS are the primary source of information intended to outline the special precautions and controls necessary for handling specific hazardous chemicals and responding to emergency situations. SDS's are typically provided by the chemical manufacturer or chemical supplier and are required to be presented in a consistent 16-section format;

1. Identification of the substance or mixture and of the supplier
2. Hazard identification
3. Composition/information on ingredients
4. First-aid measures
5. Fire-fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls/personal protection
9. Physical and chemical properties

10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal consideration
14. Transport information
15. Regulatory information
16. Other information

See Appendix A-1 for more information on Safety Data Sheets

Labeling

Containers in the Workplace

Labels are designed to provide information to employees concerning the hazards of various chemicals. Therefore, it is important that hazardous chemicals remain in properly labeled containers. The Hazard Communication Standard requires that workplace containers with hazardous products be labeled legibly, in English, with the contents and appropriate hazard warnings prominently displayed as part of the label. As a minimum, each label must contain the following:

- Identification of the material in the container (chemical name and constituents).
- Appropriate physical and health hazard warnings including target organ effects.
- Name and address of chemical manufacturer, importer, or the responsible party (applies only to manufacturers' labels. Secondary containers must contain the product and/or chemical name and primary hazards).

All labels on incoming chemicals must not be defaced in any way. Observation or other detection of defaced labels must be immediately reported to supervision so that appropriate labels can be applied.

Labels may be replaced if damaged, worn or accidentally removed. Any container with a missing or defaced label will be removed by the supervisor or operator and not returned until the condition has been rectified.

Portable and Secondary Containers

All portable and secondary containers of hazardous chemicals require labeling. The exception to this policy: portable containers of hazardous chemicals do not have to be labeled if they contain chemicals transferred from a labeled container, and are intended only for the immediate use by and remain in the constant control of the employee who performs the transfer. All other containers and usage will require labeling. The employee who uses the portable or secondary container is responsible for placing the label on the container.

At minimum, the label must contain the product name that matches the original manufacture's label, and the primary hazard (i.e. flammable, corrosive, toxic, etc.).

Employees who have questions about the precautionary labeling system should contact their supervisor.

See Appendix A-2 for more information on Chemical Labels.

Postings

The entrances to all work areas where hazardous chemicals are present are to be posted with appropriate warnings signs or placards.

Chemical Inventory

All West Chester University employees who handle and store chemicals must maintain a master chemical inventory list and have a SDS on file for each chemical listed. Each list entry must identify the manufacturer and contain the product name listed on both the container label and SDS. Employees in each department should be familiar with the location and use of the chemical inventory. Employees who have questions about the chemical inventory list should contact their immediate supervisor.

Physical inventory of all chemicals in the facility must be reviewed and updated on an annual basis by each department. If a chemical listed on the inventory does not have a corresponding SDS on file, it must be sought out from suppliers. If the SDS is not obtained, the chemical in question should be removed from use and disposed of per WCU waste procedures.

Contact EHS for access to MSDS online. An electronic system for SDS management and employee right-to-know access.

Non-Routine Hazard Tasks

Departmental Responsibilities

Periodically, employees are required to perform non-routine tasks that are hazardous (i.e. confined space entry, boiler clean out, or replacing hazardous chemical piping). Prior to starting work on such tasks, Department Heads or Managers/Supervisors will provide each affected employee with information about the hazardous chemicals or materials he/she may encounter during the assigned task. This information will include specific physical and health hazards, protective and safety measures the employee can use, and steps to be taken to reduce the hazards.

Employee Right to Know

Department Heads or Managers/Supervisors will notify all other employees working in the area prior to the non-routine task being performed.

Contractors and Visitors

Outside Contractors Notification

The WCU contact/hiring personnel and/or area supervisor shall review any specific hazards in the work area(s) with the contractor's job supervisor and provide any requested SDSs. The contractor job supervisor is required to provide both the UWM contact and US&A with their SDSs for any hazardous materials they may bring on site or use on site during their job assignment. If the contractor introduces a new hazard, affected employees will be trained by their supervisor.

Visitors

Visitors to areas where hazardous chemicals are used or stored shall be advised by the escorting Supervisor or UWM employee of the health and physical hazards and the necessary precautions in the work area.

Training

Each employee working with or potentially exposed to hazardous chemicals must receive training on the safe use of these chemicals. Training is can be provided by EHS and will cover the following topics:

1. Methods and observations to detect the presence or release of hazardous chemical
2. Physical and health hazards of chemicals in workplace
3. Measures to protect themselves (work practices, emergency procedures, PPE)

4. Details of program, including labels (manufacturer and workplace specific), SDS (how to obtain SDS, how to read and use)

References

[Pennsylvania Worker and Community Right to Know Act \(Act 159 of 1984\)](#) OSHA Hazard Communication Standard

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Appendix A: Safety Data Sheets (SDS)

A Safety Data Sheet (SDS), formerly called a Material Safety Data Sheet (MSDS), provides detailed information about the chemical, including the properties of the chemical, the hazards associated with the chemical, safe handling practices, and emergency information. Prior to the GHS, there was no required format for SDSs. The GHS standardized SDSs into 16 sections.

Section 1: Identification of the substance or mixture and of the supplier

Section 2: Hazard identification

Section 3: Composition/information on ingredients

Section 4: First-aid measures

Section 5: Fire-fighting measures

Section 6: Accidental release measures

Section 7: Handling and storage

Section 8: Exposure controls/personal protection

Section 9: Physical and chemical properties

Section 10: Stability and reactivity

Section 11: Toxicological information

Section 12: Ecological information

Section 13: Disposal consideration

Section 14: Transport information

Section 15: Regulatory information

Section 16: Other information

SDSs can be long documents, but several sections can provide useful information when trying to identify the hazards associated with the chemical and how to protect yourself. Please note that SDS produced by different companies for the same product may not include the same information. Contact EHS if you have any questions regarding the SDS.

Section 1: The following example is from the SDS for the chemical WD-40.

Section 2: Is one of the most important sections of the SDS. This section contains a summary of the hazards using the GHS pictograms, hazard statements, and precautionary statements.

2 – Hazards Identification

Hazcom 2012/GHS Classification:

Flammable Aerosol Category 1

Gas Under Pressure: Compressed Gas

Aspiration Toxicity Category 1

Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects)

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

Label Elements:



DANGER!

Extremely Flammable Aerosol.

Contains gas under pressure; may explode if heated.

May be fatal if swallowed and enters airways.

May cause drowsiness or dizziness.

Prevention

Keep away from heat, sparks, open flames, hot surfaces. – No smoking.

Do not spray on an open flame or other ignition source.

Pressurized container: Do not pierce or burn, even after use.

Avoid breathing vapors or mists.

Use only outdoors or in a well-ventilated area.

Response

IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

Storage

Store locked up.

Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place.

Disposal

Dispose of contents and container in accordance with local and national regulations.

Section 4: Provides information on first-aid measures to be taken if exposed.

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.

Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.

Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.

Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

Signs and Symptoms of Exposure: Harmful or fatal if swallowed. Aspiration of liquid into the lungs during swallowing or vomiting may cause lung damage. May cause eye and respiratory irritation. Inhalation of mists or vapors may cause drowsiness, dizziness and other nervous system effects. Skin contact may cause drying of the skin.

Indication of Immediate Medical Attention/Special Treatment Needed: Immediate medical attention is needed for ingestion.

Section 7: Provides information about safe handling and storage, including incompatibles.

7 – Handling and Storage

Precautions for Safe Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.

Conditions for Safe Storage: Store in a cool, well-ventilated area, away from incompatible materials. Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol. Store away from oxidizers.

Section 8: Provides information about controlling exposures.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
LVP Aliphatic Hydrocarbon	1200 mg/m ³ TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m ³ TWA (Inhalable) ACGIH TLV (as Mineral oil) 5 mg/m ³ TWA OSHA PEL (as Oil mist, mineral)
Aliphatic Hydrocarbon	1200 mg/m ³ TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA, 30,000 ppm STEL ACGIH TLV 5000 ppm TWA OSHA PEL

The Following Controls are Recommended for Normal Consumer Use of this Product

Appropriate Engineering Controls: Use in a well-ventilated area.

Personal Protection:

Eye Protection: Avoid eye contact. Always spray away from your face.

Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended

Appropriate Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Personal Protection:

Eye Protection: Safety goggles recommended where eye contact is possible.

Skin Protection: Wear chemical resistant gloves.

Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.

Work/Hygiene Practices: Wash with soap and water after handling.

Appendix B: Globally Harmonized System (GHS) of Classification and Labelling of Chemicals

GHS Elements

Hazard Classes

There are 28 GHS hazard classes, 16 under physical hazards, 10 under health hazards, and 2 under environmental hazards. Each hazard class is further divided into hazard categories based on the severity of the hazard. For example, the hazard class “Flammable Liquids” is divided into 4 categories based on the flash point and boiling point of the liquid.

Hazard Statements

GHS uses standardized hazard statements, which are phrases that describe the nature and severity of the hazard. Each hazard statement is assigned a unique code consisting of a letter “H” followed by three numbers. Examples of hazard statements include:

- H225 Highly flammable liquid and vapor and
- H331 Toxic if inhaled

Precautionary Statements

GHS uses precautionary statements, which are phrases that describe measures to minimize or prevent adverse effects from a chemical, including preventing exposure, proper storage, emergency response, and proper disposal. Each precautionary statement is assigned a unique code consisting of a letter “P” followed by three numbers. Examples of precautionary statements include:






- P210 Keep away from heat, hot surface, sparks, open flames, and other ignition sources
- P304 If inhaled: *(this will be customized by the manufacturer based on the specific chemical)*
- P341 If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
- P403 Store in a well-ventilated place.

Pictograms



Pictograms are a standardized element of GHS and are intended to convey health, physical, and environmental hazards associated with the chemical. There are 9 pictograms, which are matched to GHS hazard classes and categories. A single pictogram may be matched to more than one hazard class and category. It is important to read the hazard statements to understand the specific hazard indicated by the pictogram.

For example, the exclamation mark pictogram may be used for acutely toxic chemicals that are harmful if swallowed, inhaled, or in contact with skin, chemicals that cause skin or eye irritation, chemicals that cause sensitization of the skin, or chemicals that cause narcotic effects (drowsiness or dizziness). The hazard statement(s) will specify which of these hazards are indicated by the exclamation mark.

Physical Hazards

Pictogram	Pictogram Name	Hazard Class(es)
	Explosion Bomb	Explosives Some self-reactive chemicals Some organic peroxides
	Flame	Flammable gases, liquids, and solids Pyrophoric liquids and solids Some self-reactive chemicals Some organic peroxides
	Flame Over Circle	Oxidizers
	Gas Cylinder	Gases under pressure, including <ul style="list-style-type: none">Compressed gasesLiquified gasesRefrigerated liquified gases
	Corrosion	Corrosive to metals

Health Hazards

Pictogram	Pictogram Name	Hazard Class(es)
	Skull and Crossbones	Some acute toxins
	Exclamation Mark	Some acute toxins Skin and eye irritant Skin sensitizer Some specific organ toxicity



Health Hazard

Respiratory sensitizers
Mutagens
Carcinogens
Reproductive hazards
Some specific organ toxicity
Aspiration hazards

Environmental



Environment

Hazardous to aquatic environment

The GHS System

The following elements will appear on a GHS compliant chemical label:



1. Product Identifier: This is typically the chemical name.
2. Signal Word (Danger or Warning): Indicates the severity of the hazard. Danger is used for more severe hazards.
3. Hazard Statements: Describes the health and physical hazard(s) the chemical presents. Hazard statements are standardized by the GHS system based on hazard classification.
4. Precautionary Statements: Describes recommended measures that should be taken to minimize or prevent adverse effects from exposure to the chemical or improper storage or handling. The GHS system provides standardized precautionary statements based on the hazard classification, but there may be additional, non-standard statements provided by the manufacturer or importer.
5. Manufacturer or Importer Information: Name, address, and telephone number of manufacturer or importer.
6. Pictograms: Universal symbols identifying the hazard classification(s). Pictograms are standardized by the GHS system based on hazard classification.

Other Hazard Classification Systems

Chemicals manufactured or imported prior to 2015 may use a different hazard classification system on the label. Two of the most common systems are NFPA and HMIS. Both systems follow a similar numerical hazard classification and labels will typically contain the following information:



1. Product Identifier: This is typically the chemical name.
2. Signal Word (Danger or Warning): Indicates the severity of the hazard. Danger is used for more severe hazards.
3. Hazard Summary: Describes the primary health and physical hazard(s) the chemical presents.
4. Precautions: Identifies PPE and other measures needed for safe handling.
5. NFPA Diamond or HMIS Rectangle: Numerical hazard rating system with numbers from 0 to 4, with 0 indicating a minimal hazard and 4 indicating a severe hazard. Each color/position indicates a different hazard classification.

Comparison of NFPA and HMIS Hazard Rating Systems

The NFPA and HMIS systems were developed for different purposes and provide slightly different information. The NFPA system was developed to provide firefighters and other emergency responders with hazard information about the chemicals they may encounter in a fire or other emergency. The HMIS system was developed to provide workers with hazard information about the chemicals they work with.

The NFPA diamond provides the following information:

- Blue/Left diamond indicates the health hazard rating. The NFPA health hazard rating is based on acute health hazards.
- Red/Top diamond indicates the flammability hazard rating.
- Yellow/Right diamond indicates the reactivity hazard rating.
- White/Bottom diamond provides information about special hazards associated with the chemical, such as COR for corrosive, OXY for oxidizer, or ~~W~~ for “use no water.”

HMIS System:

- Blue/Top row indicates the health hazard rating. The HMIS health hazard rating is based on both chronic and acute health hazards.
- Red/Second row indicates the flammability hazard rating.
- Yellow/Third row indicates the reactivity hazard rating.
- White/Bottom row identifies the personal protective equipment (PPE) required to safely handle the chemical.