

# DUQUESNE UNIVERSITY

## HAZARD COMMUNICATION PROGRAM: EMPLOYEE RIGHT TO KNOW

Prepared by: Environmental Health and Safety Department

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### UNIVERSITY POLICY

The Department of Environmental Health and Safety has overall responsibility for this program. This program will be reviewed annually and updated when deemed necessary. Copies of the written program may be obtained from the Department of EHS.

Under this program, University employees and students will be informed about the contents of the Hazard Communication Standard, the hazardous properties of chemicals with which they work, safe handling procedures, and measures to take to protect themselves from these chemicals. University employees will also be informed of the hazards associated with non-routine tasks, such as the cleaning of vessels, and the hazards associated with chemicals in unlabeled pipes.

### PURPOSE

This written Hazard Communication Program is intended to inform faculty, staff, students and emergency response personnel about the hazardous substances that may be encountered at Duquesne University and the appropriate measures required for working safely with these substances. This Hazard Communication Program is intended to comply with the requirements set forth in the OSHA Hazard Communication Standard 29 CFR 1910.1200 (Globally Harmonized System) and Part XIII of the Pennsylvania Worker and Community Right-to-Know Act.

### SCOPE

This program applies to all work operations in the University where employees and students may be exposed to hazardous substances known to be present under normal working conditions, classroom/laboratory exercises, or

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during an emergency situation. This program is available to all Duquesne University employees and students or their representatives upon request. The written program is also available at the Department of Environmental Health and Safety and online at [www.duq.edu/ehs](http://www.duq.edu/ehs)

## RESPONSIBILITIES

### Environmental Health and Safety

The EHS Department is responsible for the overall administration of the Hazard Communication Program.

EHS will:

- Provide training to inform employees of special hazards, how to identify hazards and methods of mitigating those hazards.
- Provide training on how to access safety data sheets (SDS's) and the content.
- Provide workplace hazard analyses to determine level of risk and appropriate protection/guards.
- Provide access to SDSs in each work area.
- Complete Hazardous Substance Survey Forms in compliance with state regulations.

### Supervisors

Supervisors and department heads shall assure the timely completion of a chemical inventory of their areas on a yearly basis.

### Purchasers

“Purchasers” includes all individuals who purchase, receive and/or distribute chemicals. These persons are responsible for the receipt and proper distribution of Safety Data Sheets.

- *Purchasers* shall require SDSs be provided by manufacturer's or distributors for each shipment.
- *Receivers of packages to campus* shall attach copies of SDSs to chemicals as they are distributed throughout campus. For example, if a pallet of window cleaner is being distributed to 6 different buildings, 6 copies of the SDS should be made: one for each building. The original goes to the Bushinski Building, Department of Facilities Management.
- *Receivers of packages to buildings* shall collect incoming SDSs and insert them into SDS binder at that building's Right-to-Know Center.

### Individual Users

“Individual users” refers to the actual users of chemicals on campus. These individuals are responsible for being aware of the locations of Right-to-Know Centers, how to use an SDS, the hazards associated with their work tasks, how to identify hazards and the appropriate PPE and safety equipment available to them

## DEFINITIONS

**Chemical** means any substance, or mixture of substances.

**Chemical manufacturer** means an employer with a workplace where chemical(s) are produced for use or distribution.

**Chemical name** means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name that will clearly identify the chemical for the purpose of conducting a hazard classification.

**Classification** means to identify the relevant data regarding the hazards of a chemical; review those data to ascertain the hazards associated with the chemical; and decide whether the chemical will be classified as hazardous according to the definition of hazardous chemical in this section. In addition, classification for health

and physical hazards includes the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical hazards.

**Commercial account** means an arrangement whereby a retail distributor sells hazardous chemicals to an employer, generally in large quantities over time and/or at costs that are below the regular retail price.

**Common name** means any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

**Container** means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

**Distributor** means a business, other than a chemical manufacturer or importer, which supplies hazardous chemicals to other distributors or to employers.

**Employee** means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

**Employer** means a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

**Exposure or exposed** means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g., accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (e.g., inhalation, ingestion, skin contact or absorption.)

**Foreseeable emergency** means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.

**Hazard category** means the division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

**Hazard class** means the nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.

**Hazard not otherwise classified (HNOC)** means an adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

**Hazard statement** means a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

**Hazardous chemical** means any chemical, which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

**Health hazard** means a chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in Appendix A to §1910.1200 — Health Hazard Criteria.

**Immediate use** means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

**Importer** means the first business with employees within the Customs Territory of the United States, which receives hazardous chemicals produced in other countries for the purpose of supplying them to distributors or employers within the United States.

**Label** means an appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.

**Label elements** means the specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

**Mixture** means a combination or a solution composed of two or more substances in which they do not react.

**Physical hazard** means a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. *See* Appendix B to §1910.1200 — Physical Hazard Criteria.

**Pictogram** means a composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.

**Precautionary statement** means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling.

**Produce** means to manufacture, process, formulate, blend, extract, generate, emit, or repackage.

**Product identifier** means the name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

**Pyrophoric gas** means a chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.

**Responsible party** means someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

**Safety data sheet (SDS)** means written or printed material concerning a hazardous chemical that is prepared in accordance with paragraph (g) of this section.

**Signal word** means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for the less severe.

**Simple asphyxiant** means a substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

**Specific chemical identity** means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

**Substance** means chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent, which may be separated without affecting the stability of the substance or changing its composition.

**Trade secret** means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix E to §1910.1200 — Definition of Trade Secret, sets out the criteria to be used in evaluating trade secrets.

**Use** means to package, handle, react, emit, extract, generate as a byproduct, or transfer.

**Work area** means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

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

## **SAFETY DATA SHEETS (SDSs)**

SDSs are information sheets produced from manufacturers for all chemicals in the workplace. SDSs provide University employees and students with specific information on the chemicals that are being used.

### Hazard Determination Procedure

#### *Materials Received*

Duquesne University will rely on hazard evaluations performed by the chemical manufacturers and importers of all chemicals purchased.

Safety Data Sheets (SDSs) obtained from suppliers on all chemicals/substances purchased will be used in determining health and safety hazards of substances used at the University. If SDSs are not properly completed or available for review, the chemical will not be used until the complete SDS is obtained. The supplier and/or manufacturer must be contacted requesting the updated SDS.

#### *Materials Produced*

Process mixtures prepared at Duquesne University will be assumed to present the same health hazards as each component of the mixture. The SDSs of all components will be used in determining the hazards present.

If any of the components within a mixture are carcinogens, the mixture will be considered to be carcinogenic if the carcinogenic component is present in concentrations equal to or greater than 0.1%.

If any ingredient in the mixture is released in concentrations, which would exceed the established OSHA Permissible Exposure Limit (PEL) or ACGIH Threshold Limit Value (TLV), the mixture will be assumed to present the same hazard as the component released.

The supervisor/manager of each process is responsible for determining the hazard of process mixtures. The Director, Safety Manager and/or the EHS Technician may be contacted for assistance should questions or concerns arise.

### SDS Maintenance

The supervisor/manager, dean, and/or department head of each department that utilizes any chemicals is responsible for obtaining and maintaining SDSs for those chemicals. These SDSs will be available to all employees and students during working and classroom hours. Supervisors/managers, deans and/or department heads will contact the chemical manufacturer or vendor if additional research is necessary. In addition, an updated copy of the SDS must be provided to the EHS department.

### Locations

English language versions of SDSs corresponding to each building's inventory will be maintained in one or two central locations in each building. Laboratories will maintain an inventory of chemicals and online file of all SDS's.

### Missing SDS

When an SDS is needed, the chemical manufacturer or supplier will be contacted, via the phone or by writing, requesting an SDS for that particular product/chemical necessary to complete a task. If the manufacturer or vendor does not supply the SDS on the first request, the manufacturer or vendor will be requested again in writing. At this time, the requesting supervisor/manager will contact the EHS Department who will then notify the local OSHA office.

## **CHEMICAL INVENTORY**

### Chemical Inventory List

All chemicals, hazardous or not, used at the University will be listed on a Chemical Inventory List for each building. Each department supervisor, dean, and/or department head is responsible for ensuring the Chemical Inventory List is updated and maintained for all chemicals used within his/her department.

Faculty, employees and students who come into contact with hazardous chemicals on the list need to know what those chemicals are and how to protect themselves. That is why it is so important that hazardous chemicals are identified, whether they are found in a container or generated in work operations (for example, welding fumes, dusts, and exhaust fumes). The hazardous chemicals on the list can cover a variety of physical forms including liquids, solids, gases, vapors, fumes, and mists. Sometimes hazardous chemicals can be identified using purchase orders; identification of others requires an actual inventory of the facility.

The supervisor/manager, deans, and department heads of each department throughout the University will be responsible for ensuring a list of all chemical substances used on-the-job by their employees or students is

updated and maintained. This listing will be completed for all departments and updated when chemicals are discontinued and/or new chemicals are purchased. The supervisor/manager, dean, and/or department head of each department will provide the EHS department with an updated list of all chemicals used and stored in the work area **every year**. This list will also identify chemicals that have been proven to be hazardous defined by the OSHA Hazard Communication Standard.

The chemicals from the following sources are to be considered hazardous.

- Any chemical listed in 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).
- Any chemical listed in Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment, American Conference of Governmental Industrial Hygienists (ACGIH).
- Any chemical listed in the Annual Report on Carcinogens, National Toxicology Program (NTP).
- Any chemical listed in Monographs, International Agency for Research on Cancer (IARC).

The Department of EHS can provide a list of these chemicals; links to these lists are also provided in the “References” section of this document.

#### Hazardous Substance Survey Form

An updated Hazardous Substances Survey (HSS) will be available to all employees at the Right-To-Know Center in the Department of Facilities Management office, and the Director of EHS’s office. Building specific HSS Forms will be made available at each Right-to-Know Center in each building. An updated listing will also be made available to students during the handling of hazardous chemicals.

### **LABELS AND OTHER FORMS OF WARNING**

Supervisors/managers, deans and/or department heads will assure that all chemical containers in their work area are properly labeled in English, are legible and prominently displayed though their sizes and colors can vary. This includes both in-house and shipped containers.

#### Materials Received

It is Duquesne University’s policy to require that suppliers/vendors of chemical products label those substances. At a minimum, the label on the containers of all substances shipped to the University shall contain:

- The identity of the material
- Appropriate hazard warnings and pictograms
- Name and address of the manufacturer or importer

No container will be accepted unless it is properly labeled with the required information. General Stores in Mellon Hall and Receiving in Facilities Management are responsible for ensuring all chemical containers are properly labeled before releasing that substance to the department requesting it.

#### Portable/Temporary Containers

In-house transfer containers used at the University will be labeled with the following information:

- Identity of the material
- Appropriate hazard warnings and pictograms

If employees/students transfer chemicals from a labeled container to a portable container and that chemical is intended only for IMMEDIATE use, no labels are required on the portable container. Under no circumstance will an unlabeled container be used when it is not intended for the chemical to be used immediately.

#### Pipes/Piping Systems

A number of pipes and piping systems are labeled throughout the University and it is the University's ongoing objective to label all piping. Those pipes/piping systems not labeled will be described in training sessions.

### Stationary Containers

All stationary containers will be labeled with the following information:

- Identity of the material
- Appropriate hazard warnings and pictograms
- Name and address of the chemical manufacturer

Supervisors/managers, deans, and/or department heads may use signs, placards, and process sheets, batch tickets or other written material instead of affixing labels to stationary chemical containers. If these methods are used, all required information will be present.

### Definitions

“Identity of the material”- The chemical identity is found on the label, the SDS, and the chemical inventory. Therefore, the chemical identity links these three sources of information. The chemical identity used by the supplier may be a common or trade name, or a chemical name.

“Appropriate hazard warnings”- The hazard warning is a brief statement of the hazardous effects of the chemical (i.e., "flammable," or "causes lung damage").

“Other information”- Labels frequently contain other information, such as precautionary measures (i.e., "do not use near open flame"), this information is required for compliance starting in January, 2015.

## **INFORMATION AND TRAINING**

Information and training is a critical part of the hazard communication program. University employees and students who work with or are potentially "exposed" to hazardous chemicals will receive initial training and any necessary retraining on the Hazard Communication Standard and the safe use of those hazardous chemicals. Department supervisors/managers, deans, department heads, and/or the EHS department will be responsible for conducting the training for his/her specific area. "Exposure" means, "an employee/student is subjected to a hazardous chemical in the course of employment/training/classroom through any route of entry (inhalation, ingestion, skin contact or absorption) and includes potential (accidental or possible) exposure." Whenever a new hazard is introduced or existing hazards change, additional training will be provided.

Annual hazard communication training will be offered to employees through the Department of EHS. New employees will be trained when they are assigned to work in areas involving hazardous chemicals. Students taking courses in which they may be in contact with chemicals and those conducting research that involves the use of chemicals will be trained on safety and safe laboratory practices by the instructor of the class or research.

### Training Format

The information phase of the program will inform employees and students of the following:

- The requirements of Employee Information and Training section under the standard.
- Operations/work areas where hazardous chemicals are present.
- How to obtain a copy of Duquesne University's Hazard Communication Program
- Location of the Hazardous Substance Survey and SDSs

The training phase of the program emphasizes the following elements:

- Summary of the standard and this written program, including what hazardous chemicals are present, the labeling system used, and access to SDS information and what it means.



- Chemical and physical properties of hazardous materials (e.g., flash point, reactivity) and methods that can be used to detect the presence or release of chemicals (including chemicals in unlabeled pipes).
- Physical hazards of chemicals (e.g., potential for fire, explosion, etc.).
- Health hazards, including signs and symptoms of exposure to chemicals and any medical condition known to be aggravated by exposure to the chemical.
- Procedures to protect against hazards (e.g., engineering controls; work practices or methods to assure proper use and handling of chemicals; personal protective equipment required, and its proper use, and maintenance; and procedures for reporting chemical emergencies).
- How to look up a specific chemical on the Imagewave online database

## **HAZARDOUS NON-ROUTINE TASKS**

When employees are required to perform non-routine tasks that may have the potential to expose workers to hazardous chemicals, the supervisor/manager of each work area will inform employees of these hazards prior to starting the work. This information will be passed on to all employees and outside contractors performing the necessary, non-routine task.

## **ON-SITE CONTRACTORS**

All outside contractors performing services on University property will be made aware of any/all potentially hazardous materials, which contracted employees, may come into contact with. The supervisor/manager responsible for the area(s) in which the outside contractors are working will provide this information prior to start of work.

This will be accomplished by:

- Providing a list of all hazardous chemicals/substances within the area the contractors are working.
- Providing the applicable Material Safety Data Sheets (SDSs) for all hazardous chemicals/substances within the area the contractors are working.

## **REFERENCES**

OSHA Hazard Communication Standard 29CFR 1910.1200

[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=standards&p\\_id=10099](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10099)

Part XIII of the Pennsylvania Worker and Community Right-to-Know Act

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=554140&mode=2>

Hazardous Material Listings

OSHA's 29 CFR 1910.1000, table Z-1 through Z-3

[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=9992](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992)

[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=9993](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9993)

[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=9994](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9994)

Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment, published by the American Conference of Governmental Industrial Hygienists (ACGIH)

(Not available online- available for purchase at: <http://www.acgih.org/home.htm>)

The Registry of Toxic Effects of Chemical Substances, published by the National Institute of Occupational Safety and Health

(Not available for free- Subscribe at: <http://grc.ntis.gov/rtecs.htm>)