UNIVERSITY OF TOLEDO

SUBJECT: HAZARD COMMUNICATION Procedure No: HM-08-018

PROCEDURE STATEMENT

The hazards of materials used by the University of Toledo shall be evaluated, and information concerning those hazards shall be provided to employees.

PURPOSE OF PROCEDURE

To promote safe working conditions for employees by evaluation and communication of the hazardous properties of materials used, in accordance with OSHA's Hazard Communication Standard. This program is designed to communicate this information through employee training, proper container labeling and Safety Data Sheets (SDS's) which contain facts about the physical and health hazards of chemicals.

PROCEDURE

Global Harmonization System (GHS)

The Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard has aligned with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

The hazard communication standard requires chemical manufacturers and importers to evaluate the chemicals they produce or import and provide hazard information to employers and workers by putting labels on containers and preparing safety data sheets. The standard provides a single set of harmonized criteria for classifying chemicals according to their health and physical hazards and specifies hazard communication elements for labeling and safety data sheets.

I. Hazard Determination

Materials listed by the Occupational Safety and Health Administration (OSHA) and/or as indicated as hazardous by the Safety Data Sheet (SDS) supplied by the manufacturer or vendor of the material shall be covered by this policy. For purposes of this policy, the following criteria shall be used in making hazard determinations that meet the requirements of OSHA's Hazard Communication Standard.

The Hazard Communication Standard defines a hazardous chemical as 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.

A chemical is a **health hazard** if the chemical 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
Carcinogencity
Reproductive Toxicity
Specific Target Organ Toxicity (Single or Repeated Exposure)
Aspiration Hazard

A chemical is a **physical hazard** if the chemical 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
Orgainc Peroxide
Corrosive to Metal
Gas Under Pressure
In contact with water emits flammable gas

II. Safety Data Sheets

1. Departmental managers shall obtain SDSs for all hazardous products in use in their department by the effective date of this policy.
2. Prior to any use or distribution of a new material, a SDS shall be obtained by the departmental manager and requirements in sections III, IV, and V shall be completed.
3. SDSs shall be readily accessible to employees in their work area. SDSs can be found within a dedicated binder labeled SDSs in the area of the chemicals use or in a dedicated folder in Chemwatch at http://www.utoledo.edu/depts/safety/ChemWatch.html .
4. SDSs received by laboratory directors shall be made readily accessible to laboratory employees in their work area. Laboratory Directors should make a good faith effort to obtain SDSs for the hazardous chemicals used in their labs. Employees have the right to obtain copies of any SDS and/or list(s) of hazardous substances in their workplace.
5. Please be aware that many SDS's can be rapidly obtained using Chemwatch at http://www.utoledo.edu/depts/safety/ChemWatch.html
6. SDS's now require a 16 section format (see 1910.1200 Appendix D). The following section numbers and headings must be included, in order:

    - Section 1 – Identification
    - Section 2 – Hazard(s) 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 Considerations
    - Section 14 – Transport Information
    - Section 15 – Regulatory Information
    - Section 16 – Other information including date of preparation or last revision

III. Record Keeping

Each department or laboratory shall maintain a written inventory of the hazardous chemicals used by their department office or work area. For mixtures, the inventory must also include the principal hazardous component of the mixture. Inventories shall be updated as necessary.

IV. Labeling

Labeling is an important means of communicating container contents and potential hazards associated with chemicals. Furthermore, it is important to use a coding or labeling system which communicates such hazards to the people who come in contact with chemicals.

Global Harmonization System (GHS) Labeling System

Under the GHS system, labels on shipped containers must contain the following:

Product identifier

Signal word

Hazard statement(s);

Pictogram(s);

Precautionary statement(s); and,

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

All chemicals in the lab must be labeled with the original shipping label or the following:

Product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical. Labels for secondary containers can be printed on Chemwatch.

HCS Pictograms and Hazards

Health Hazard

- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Flame

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

Exclamation Mark

- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)

Gas Cylinder

- Gases Under Pressure

Corrosion

- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals

Exploding Bomb

- Explosives
- Self-Reactives
- Organic Peroxides

Flame Over Circle

- Oxidizers

Environment

(Non-Mandatory)

- Aquatic Toxicity

Skull and Crossbones

- Acute Toxicity (fatal or toxic)

V. Employee Education and Training

The Environmental Health and Radiation Safety Department provides general hazard communication training during new employee orientation and through the safety test bank.

General training includes:

- The requirements of the Hazard Communication Standard.
- Categories of hazards in the work place.
- The availability of the the written hazard communication program.
- Air monitoring results if required
- Labeling
- SDS's

Department specific Hazard Communication training shall be provided to all employees who may be exposed, under normal conditions of use or in a foreseeable emergency, to hazardous materials.

Training shall include:

- Any operations in their work area where hazardous chemicals are present.
- The location of list of hazardous chemicals and the SDS's in their work area.
- Information on the hazards of the chemicals in the work area.
- The measures employees can take to protect themselves from these hazards, including specific procedures such as appropriate work practices, emergency procedures, and PPE.

VI. Application to Laboratories

This policy applies to laboratories as follows:

- Labels on laboratory chemical containers shall not be removed or defaced.
- SDSs for laboratory chemicals which are received by the institution shall be readily accessible to laboratory employees in their work area.
- Laboratory workers shall be apprised of the hazards of the chemicals in their work places.
- Refer to the Chemical Hygiene Plan.

VII. Contractor Employees

1. Any contractual agreement between an outside contractor and the University of Toledo shall address the hazard communication standard through the Contract Administrator of Business Services.
2. Contractor employees working in areas where they may potentially be exposed to hazardous materials shall be informed of the Hazard Communication program and the availability of SDSs for the materials to which they may be exposed. This is the responsibility of the Facilities Maintenance, or designee, who is responsible for contractor coordination.
3. Contractors shall supply a list of all hazardous materials brought on-site to the Facilities Maintenance Department, who will maintain the list in the appropriate project file. SDS's for these materials should be available at the site of contractors use and to the Environmental Health and Radiation Safety Department, upon request.

Reference: OSHA, Hazard Communication Standard CFR291910.1200 and Appendices

Source: Safety & Health Committee

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