

**TEXAS A&M INTERNATIONAL UNIVERSITY**

**HAZARD COMMUNICATION PROGRAM**

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# TEXAS A&M INTERNATIONAL UNIVERSITY HAZARD COMMUNICATION PROGRAM

## **I. INTRODUCTION:**

The Texas Hazard Communication Act (THCA), Revised 1993, Chapter 502 of the Health and Safety Code (HSC), requires public employers to provide information to employees regarding hazardous chemicals they may be exposed to in the workplace. The Public Employers Community Right-to-Know Act, Chapter 506 of the Health and Safety Code, and Texas Administrative Code (TAC), Title 25 Chapter 295, requires public employers to make information regarding hazardous chemicals accessible to local fire departments, local emergency planning committees, and, through the Texas Department of Health, the general public.

Texas A&M International University (TAMIU), through the TAMIU Hazard Communication (HazCom) Program, shall comply with these Acts by providing training, appropriate personal protective equipment, and information regarding hazardous chemicals. Further, a written procedure shall be developed, implemented, and maintained that describes how the requirements of the TAMIU HazCom Program will be accomplished with each workplace. The TAMIU HazCom Program is administered through the Safety Coordinator in the Physical Plant Department with responsibility for compliance delegated throughout administrative channels to every supervisor. The HazCom Program encompasses all TAMIU employees, including student employees, who have occupational exposure to hazardous chemicals.

## **II. EXEMPTIONS AND EXCEPTIONS – HSC 502.004; 506.005**

The provisions of the HazCom Program do not apply to chemicals in the following categories:

1. Hazardous waste regulated under the Federal Resource Conservation and Recovery Act;
2. Tobacco or tobacco products;
3. Wood or wood products;
4. Any article that is formed to a specific shape or design during manufacture, that has end use functions dependent in whole or in part on its shape or design during end use, and that does not release or otherwise result in exposure to a hazardous chemical under normal conditions of use (e.g., tires, PVC piping);
5. Food, drugs, cosmetics, or alcoholic beverages in a retail food sale establishment that are packaged for sale to consumers;
6. Food, drugs, or cosmetics intended for personal consumption by an employee while in the workplace;
7. Any consumer product or hazardous substance if the product is used in the workplace in the same manner as normal consumer use and if the use results in a duration and frequency of exposure that is not greater than exposures experienced by consumers;
8. Any drug, as defined in the Federal Food, Drug and Cosmetic Act;
9. Radioactive waste;
10. A hazardous chemical in a sealed and labeled package that is received and subsequently sold or transferred in that package if:
  - A. The seal and label remain intact while in the workplace;
  - B. The chemical does not remain in the warehouse more than five working days;
  - C. Personnel training requirements are met;
  - D. The chemical is not an extremely hazardous substance at or above the threshold planning quantity or 500 pounds, whichever is less.

### **III. DUTIES AND RESPONSIBILITIES:**

- A. The TAMIU **Safety Coordinator** administers and coordinates the HazCom Program for Texas A&M International University. Duties of the Safety Coordinator include:
1. Assign designated workplaces at TAMIU;
  2. Coordinate the development of a written procedure for each designated workplace that describes the method of implementing the TAMIU HazCom Program for the workplace;
  3. Monitor and coordinate program compliance for TAMIU;
  4. Maintain liaison with the Texas Department of Health:
    - a. Submit required annual Texas Tier Two report to Texas A&M System by March 1 of the following year;
    - b. Report orally or in writing, within 48 hours, the occurrence of a chemical accident that results in one or more fatalities or the hospitalization of five or more employees (this is to include circumstances of the accident, the number of fatalities and the extent of injuries) **HSC 502.012**;
  5. Compile, maintain, and provide designated workplace chemical inventory (WPCI) list;
  6. Maintain the WPCI lists for 30 years;
  7. Update the WPCIs and the Texas Tier Two report whenever a new chemical or additional quantity above normal restocking amounts of a chemical is purchased that exceeds the "reporting threshold";
  8. Provide a copy of the annual Texas Tier Two report to the Local Emergency Planning Committee and to the local fire department(s);
  9. Provide the names and telephone numbers of emergency contacts to the local fire department(s), and provide designated workplace chemical lists and Material Safety Data Sheets (MSDSs) upon request;
  10. Assist departments with training programs, as appropriate;
  11. Assist departments in obtaining MSDSs
- B. **Directors, Department Heads and Administrators** administer and coordinate the HazCom Program within their units. Their duties include:
1. Provide information for the development of a written procedure that describes the method of implementing the TAMIU HazCom Program for each designated workplace;
  2. Designate work areas within each workplace;
  3. Post official "Notice to Employees" (see Appendix III) at locations where notices are normally posted in each workplace (contact the Safety Coordinator for more information);
  4. Ensure implementation of and compliance with this Program within the department;
  5. Allow a local fire department to conduct on-site inspections upon request;
  6. Maintain training records for a minimum of 5 years;
  7. Maintain a copy of each Work Area Chemical Inventory (WACI) for the designated workplace and make them readily accessible to employees;
  8. Designate a "Department Hazard Communication Coordinator" (DHCC) and provide the name and phone number of the DHCC to the Safety Coordinator;
  9. Provide employees with appropriate personal protective equipment;
  10. Inform employees of any non-routine chemical exposure;
  11. Notify, within 24 hours, the Safety Coordinator on a chemical occurrence that results in the hospitalization of or death of an employee (notification to include circumstances of the accident, the extent of injuries, and/or the number of fatalities.)

- C. Department Hazard Communication Coordinators (DHCC)** shall:
1. Assist department personnel with the implementation of and compliance with this Program;
  2. Provide liaison between the department and the Safety Coordinator.
  3. Provide to the Safety Coordinator by November 1st of each year:
    - a. Annual WACI for each work area other than a research laboratory;
    - b. Annual notice of training completion (e.g., memo);
    - c. Names and telephone numbers of emergency contacts.
  4. Provide to the Safety Coordinator, WACI updates whenever a new hazardous chemical or additional quantity above normal restocking amounts of a hazardous chemical is purchased.
- D. Supervisors** shall ensure that the requirements of the TAMIU HazCom Program are fulfilled within their work areas. Their duties include:
1. Ensure that all employees have received appropriate training before working with or in an area containing hazardous chemicals;
  2. Provide to the Department Head, all HazCom training records;
  3. Inform employees regarding the location of the work area inventory and procedures for accessing MSDSs and obtaining workplace chemical lists;
  4. Inform the DHCC whenever a new hazardous chemical or additional quantity above normal restocking amounts of hazardous chemical is purchased.
- E. Employees** are expected to attend training, to use prudent practices and good judgment when using hazardous chemicals or hazardous procedures, and to appropriately notify other individuals who might be affected by the chemicals they use. Personnel who work with hazardous materials are expected to assume reasonable responsibility for the safety and health of themselves, others around them, and the environment.
- F. Contracted Construction, Repair and Maintenance:** Contractors must comply with Texas and Federal Hazard Communication Acts and the TAMIU HazCom Program regarding hazardous or noxious chemicals or chemical products used during projects within Texas A&M International University.
1. The Contractor shall provide prior notification of intended use of hazardous or noxious chemicals or chemical products to the TAMIU Project Coordinator, the Safety Coordinator, and the DHCC of any affected TAMIU workplace.
  2. The Contractor shall provide a list of any hazardous or noxious chemicals or chemical products to be used on the project and shall provide appropriate hazard information, including MSDSs, to the Project Coordinator.
  3. The DHCC shall ensure that individuals in the affected workplace be provided information on the hazards of the chemicals and measures that they can take to protect themselves from those hazards, and access to MSDSs.

#### **IV. NON-ROUTINE EXPOSURE - HSC 502.017(b):**

**Planned or Accidental Releases** - Party(s) responsible for the release of hazardous or noxious chemicals shall notify all individuals in the affected area and the Safety Coordinator. The responsible party(s) shall also provide to the Safety Coordinator appropriate precautionary information, including MSDSs for the chemicals involved. The Safety Coordinator shall ensure that individuals in the affected area be provided information on the hazards of the chemicals and measures that they can take to protect themselves from those hazards, and access to MSDSs. An example of non-routine exposure would be paint fumes produced during renovations in the workplace.

#### **V. EMPLOYEE NOTICE AND RIGHTS OF THE EMPLOYEES - HSC 502.017:**

An official Texas Department of Health "Notice to Employees" (see Appendix III) must be posted at the location(s) within each workplace where notices are normally posted. The Safety Coordinator shall ensure that TAMIU employees who may be exposed to hazardous chemicals (including products with which they do not work directly) be informed of the exposure and be provided access to the pertinent workplace chemical lists and MSDSs for those hazardous chemicals.

#### **VI. HAZARD INFORMATION AND TRAINING - HSC 502.009 and 502.017(b):**

Employee education and training are essential components of the TAMIU HazCom Program and are provided through formal and informal instruction. Appropriate training shall be provided to employees who use or handle hazardous chemicals as a part of their normal work assignments. Training of a new or newly assigned employee shall be given before the employee works with or handles hazardous chemicals. Employees shall receive additional training when the potential for exposure to hazardous chemicals in the employee's work area increases significantly or when the employer receives new and significant information concerning the hazards of a chemical in the employee's work area. The HazCom Program training includes two levels of training: General Safety and Work Area Specific Training. Training on the topics of both levels must be provided to employees to satisfy the training requirements for the THCA.

- A. General Safety Training** provides basic information that applies to any employee who uses or handles hazardous chemicals. Due to the nature of this training, it may be provided to groups of employees with varying work assignments. The Safety Coordinator may be able to provide this training or assist departments in providing it. This training shall include:
1. Information on interpreting MSDSs and labels, and the relationship between the two methods of hazard communication;
  2. General methods for obtaining MSDSs at TAMIU;
  3. Generic information on hazardous chemicals:
    - a. Hazards associated with chemical hazard groups (e.g., flammables, corrosives, toxics, and reactives) including acute and chronic effects;
    - b. Methods for identifying specific chemicals within each chemical hazard group (e.g., DOT labels, NFPA 704 System, chemical container labels);
    - c. Safe handling procedures, including proper storage and separation of incompatibles;
  4. Proper use of appropriate protective clothing and equipment to minimize exposure to hazardous chemicals and first aid treatment to be used with respect to the hazardous chemicals;
  5. General instructions on spill cleanup procedures and proper disposal of hazardous chemicals.

- B. Work Area Specific Training** provides chemical information to those employees working with or handling hazardous chemicals in a specific work area. . (The Environmental Health and Safety Department for Texas A & M University in College Station has videos for loan that can be used to assist with training requirements.) This training is normally provided by the employee's supervisor and shall include, as appropriate:
1. Information on hazardous chemicals known to be present in the employee's work area and to which the employee may be exposed, including:
    - a. Location within the work area,
    - b. Specific hazards, including acute and chronic effects,
    - c. Safe handling procedures.
  2. Work area location of MSDSs, or procedures for obtaining MSDSs;
  3. How to obtain and use appropriate personal protective equipment;
  4. Instructions on spill cleanup procedures and proper disposal of hazardous chemicals specific to that work area.
- C. Students:** Any student who receives compensation from Texas A&M International University is covered by the TAMIU HazCom Program and must receive the appropriate training. Non-employee students shall receive appropriate safety information and instruction if class work involves hazardous chemicals; the instructor or class supervisor shall provide this training.
- D. Training Records:** Each department shall maintain, for at least five years, a record of each employee training session, including:
1. The date of training;
  2. An attendance roster;
  3. Specific topics covered;
  4. Names of the instructors.

Documentation of HazCom training should also be placed in the employee's personnel file. Appendix V shows a suitable training record form.

- E. Notification of Training Completion:** Departments shall provide annual written notice of training completion to the Safety Coordinator stating that the required training for all department employees has been completed. This may be accomplished with a letter or memo from the DHCC.

## **VII. HAZARDOUS CHEMICAL INVENTORY:**

Public employers in Texas must maintain inventory lists of hazardous chemicals present in the workplace. The TAMIU hazardous chemical inventory requirements are specified below.

**NOTE: Chemicals in research laboratories under the direct supervision or guidance of a technically qualified individual are exempt from these inventories if:**

1. **Labels on incoming containers of chemicals are not removed or defaced;**
2. **Personnel training requirements are fulfilled;**
3. **MSDS access requirements are satisfied;**
4. **The laboratory is not used primarily to produce hazardous chemicals in bulk for commercial purposes.**

- A. Work Area Chemical Inventory (WACI):** Each work area (e.g., teaching laboratory, a chemical stock room, paint shop, art room, print center) must maintain an inventory list of all hazardous chemicals, or chemical products present in the work area, regardless of quantity (see Table 1). The hazardous chemicals or products shall be listed using the same name found on the label and MSDS. The WACI must include, as appropriate:
1. Name and telephone number of the person responsible for the work area;
  2. The department name;
  3. Location of the hazardous chemicals (building and room);
  4. Chemical name or the common name of a product and its hazardous ingredients;
  5. CAS number;
  6. Container type;
  7. Hazard associated with the chemical;
  8. Quantity of product in pounds.

This inventory must be updated and provided to the DHCC annually, upon request, and when necessary. A WACI update becomes necessary when a new chemical or additional quantity above normal restocking amounts of chemical is purchased. The DHCC shall collect the WACIs and provide them to the Safety Coordinator by November 1st of each year and as necessary. The department shall maintain a copy of each WACI for the current year and these shall be readily accessible to employees.

- B. Workplace Chemical Inventory (WPCI) - HSC 502.006:** The Safety Coordinator shall use the WACIs to compile a Workplace Chemical Inventory (WPCI). The WPCI lists only those hazardous chemicals in a designated workplace that are equal to or greater than the “workplace-reporting threshold”. If a designated workplace is occupied by more than one department, a single WPCI shall be compiled by combining all departments' WACIs for the workplace. The Safety Coordinator, employee responsible for compiling the WPCI, shall sign and date it. The WPCI will then remain on file at the Safety Coordinators Office for 30 years. A new WPCI for each designated workplace will be created by December 31st of each year or as needed. TAMIU employees may obtain a copy of the WPCI from the Safety Coordinator, upon request.
- C. Tier Two Report - HSC 295.182(d); 506.006:** The Safety Coordinator shall compile the Texas Tier Two Report for the entire campus. The Texas Tier Two Report includes all hazardous chemicals and chemical products exceeding 10,000 pounds and all extremely hazardous substances exceeding 500 pounds or the Threshold Planning Quantity, whichever is less. The report will be submitted by March 1 each year, for the preceding calendar year, to the Texas Department of Health with the appropriate filing fees. A copy of the Tier Two Report will remain on file at the Safety Coordinators Office until the following year's report is filed with the Texas Department of Health. A copy of each Texas Tier Two Report is sent to the Local Emergency Planning Committee and Laredo Fire Department. If changes need to be made to the Tier Two Report during the year, a revision of the report will be filed with the Texas Department of Health and appropriate local agencies.



## **VIII. CONTAINER LABELS - HSC 502.007:**

Containers of hazardous chemicals in laboratories and non-laboratory areas must be properly labeled.

1. Labels on primary containers must:
  - a. Identify the material as it is on the MSDS;
  - b. Identify health and physical hazards of the contents, including the organs that would be affected. An appropriate hazard warning includes (as a minimum) the key word(s) of the chemical hazard (e.g., poison, flammable, corrosive, carcinogen, etc.);
  - c. Identify the manufacturer's name and address.
2. Labels on an existing container of a hazardous chemical will not be removed or defaced unless they are illegible, inaccurate, or do not conform to the TDH standard or other labeling requirement. If a primary container label is removed or missing, the container must be relabeled as described in 1 A,B,C above.
3. Labels on secondary containers shall include the chemical identity, as it appears on the MSDS, and appropriate hazard warnings
4. Complete labels are not required on portable secondary container(s) intended for the immediate (within a work shift) use by the employee who performs the transfer. However, the contents should be readily identifiable.

**NOTE: Laboratories under the direct supervision or guidance of a technically qualified individual are exempt from secondary labeling if:**

- 1. labels on incoming containers of chemicals are not removed or defaced;**
- 2. personnel training requirements are fulfilled;**
- 3. MSDS access requirements are satisfied;**
- 4. The laboratory is not used primarily to produce hazardous chemicals in bulk for commercial purposes.**

## **IX. MATERIAL SAFETY DATA SHEETS - HSC 502.006:**

Material Safety Data Sheets (MSDSs) are legal documents that provide hazard information on chemicals or chemical products produced or distributed in the United States. Federal and State laws require employers to provide employees access to MSDSs on hazardous chemicals or chemical products in the work environment. MSDS requirements for laboratory and non-laboratory areas shall be as follows.

1. Departments shall maintain a file of current MSDSs for all hazardous chemicals purchased. Departments shall review MSDSs/MSDS software yearly to ensure that they are current. The file may be electronic or printed and shall be readily available, on request, for review by employees at each workplace. It is recommended that MSDSs be maintained within each work area for those hazardous chemicals being used.
2. Departments shall provide a copy of MSDSs to the Safety Coordinator upon request.
3. Departments shall make a written request within a week to any manufacturer who fails to supply a current MSDS with hazardous chemicals or otherwise obtain a MSDS (e.g., by fax, electronic mail, etc.). A copy of an MSDS may also be obtained from TAMU Environmental Health & Safety Department homepage at <http://ehsd-online.tamu.edu> (click on "MSDS Search" and follow the appropriate instructions.)

## APPENDIX I DEFINITIONS

**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) of the Chemical Abstracts Service (CAS) rules of nomenclature or a name that clearly identifies the chemical for the purpose of conducting a hazard evaluation.

**COMMON NAME** means a designation of identification, such as a code name, code number, trade name, or generic name, used to identify a chemical other than by its chemical name.

**DEPARTMENT** includes all TAMIU entities such as departments, divisions, services, offices, or units.

**EMPLOYEE** means a person who is on the payroll of TAMIU and who may be or may have been exposed to hazardous chemicals in the person's workplace under normal operating conditions or foreseeable emergencies.

**EXPOSE** or **EXPOSURE** means that an employee is subjected to a hazardous chemical in the course of employment through any route of entry, including inhalation, ingestion, skin contact, or absorption. The term includes potential, possible, or accidental exposure under normal conditions of use or in a reasonably foreseeable emergency.

**EXTREMELY HAZARDOUS SUBSTANCE** means any substance as defined in EPCRA, Section 302, or listed by the United States Environmental Protection Agency in 40 CFR Part 355, (Appendix I of this document).

**HAZARDOUS CHEMICAL** means any element, compound or mixture of elements or compounds that is a physical or health hazard. Relatively innocuous materials such as NaCl, sugars, enzymes, etc. are exempt. A hazard determination may be made by employers who choose not to rely on the evaluations made by their suppliers if there are relevant qualitative or quantitative differences. A hazard determination shall involve best professional judgment: factors such as quantity, concentration, physical properties (i.e., volatility) and use may be considered.

**HAZCOM** is the abbreviation for Hazardous Communication Program.

**HEALTH HAZARD** includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hemopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes.

**LABORATORY** means any research, analytical, or clinical facility equipped for experimentation, observation, or practice in a science or for testing and analysis.

**NAME** -the same as is on the label, the MSDS and inventory list.

**PERSONAL PROTECTION EQUIPMENT** include clothing or devices intended to prevent exposure to hazardous chemicals (e.g., respirator, gloves, goggles, lab coats).

**PHYSICAL HAZARD** means a material for which there is scientifically valid evidence that it is a combustible liquid, explosive, flammable, compressed gas, organic peroxide, oxidizer, pyrophoric, unstable (reactive), or water reactive.

**PRIMARY CONTAINER** means the container in which the chemical arrives from the manufacturer.

**READILY AVAILABLE** to an MSDS means access during an individual's work shift.

**RESEARCH LABORATORY** means facility equipped for scientific investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of new or revised theories or laws.

**TEXAS TIER TWO REPORT** is the report submitted annually by the Safety Coordinator to the Texas Department of Health that reports quantities of hazardous chemicals per the Texas Tier Two Reporting Instructions Package from TDH.

**WORKAREA** is a room, a defined space, a utility structure or an emergency response site within a workplace where hazardous chemicals are present, produced, used, or stored and where employees are present.

**WORKPLACE** is an establishment at one geographical location containing one or more work areas. A single building or a complex of buildings in close proximity with similar work activities can be designated as a workplace.

**WORKPLACE REPORTING THRESHOLD** is when the quantity (at any time during the year) of a hazardous chemical exceeds 55 gallons/500 pounds OR the Threshold Planning Quantity (TPQ) in pounds, or 500 pounds, whichever is less, for those chemicals on the Extremely Hazardous Substance List (Appendix II).

## Appendix II

### Extremely Hazardous Substances and Their Threshold Planning Quantities

<u>CAS #</u>	<u>CHEMICAL NAME</u>	<u>TPQ</u>	<u>CAS #</u>	<u>CHEMICAL NAME</u>	<u>TPQ</u>
75-86-5	Acetone Cyanohydrin	1,000	10294-34-5	Boron Trochloride	500
1752-30-3	Acetone Thiosemicarbazide	1,000	7637-07-2	Boron Trifluoride	500
107-02-8	Acrolein	500	353-42-4	Boron Trifluoride Compound With Methly Ether (1:1)	1,000
79-06-1	Acrylamide	1,000	28772-56-7	Bromadiolone	100
107-13-1	Acrylonitrile	1,000	7726-95-6	Bromine	500
814-68-6	Acrylic Chloride	100	1306-19-0	Cadmium Oxide	100
111-69-3	Adiponitrile	1,000	2223-93-0	Cadmium Stearate	1,000
116-06-3	Aldicarb	100	7778-44-1	Calcium Arsenate	500
309-00-2	Aldrin	500	8001-35-2	Camphechlor	500
107-18-6	Allyl Alcohol	1,000	56-25-7	Cantharidin	100
107-11-9	Allylamine	500	51-83-2	Carbachol Chloride	500
20859-73-8	Aluminun Phosphide	500	26419-73-8	Carbamic Acid, Methyl-,0-(((2,4- Dimethyl-1, 3-Dithiolan-2-yl) Methylene)Amino)-	100
54-62-6	Aminopterin	500	1563-66-2	Carbofuran	10
78-53-5	Amiton	500	75-15-0	Carbon Disulfade	10000
334-97-2	Amiton Oxalat	100	786-19-6	Carbophenothion	500
7664-41-7	Ammonia	500	57-74-9	Chlordane	1000
300-62-9	Amphetamine	1000	470-90-6	Chlorfenvinfos	500
62-53-3	Aniline	1000	7782-50-5	Chlorine	100
88-05-1	Aniline,2,4,6-Trimethyl-	500	24934-91-6	Chormephos	500
7783-70-2	Antimony Pentafluoride	500	999-81-5	Cholormequat Chloride	100
1397-94-0	Antimycin A	1000	79-11-8	Chloroacetic Acid	100
86-88-4	ANTU	500	107-07-3	Chloroethane	500
10303-28-2	Arsenic Pentoxide	100	627-11-2	Chloroethyl Chloroformate	100
1327-53-3	Arsenous Oxide	100	67-66-3	Chloroform	10000
7784-34-1	Arsenous Trichloride	500	542-88-1	Cholromethyl Ether	100
7784-42-1	Arsine	100	107-30-2	Chloromethyl Methyl Ether	100
2642-71-9	Azinphos-Ethyl	100	3691-35-8	Chlorophacinon	100
86-50-0	Azinphos-Methyl	10	1982-47-4	Chloroxuron	500
98-87-3	Benzal Chloride	500	21923-23-9	Chlorthiophos	500
98-16-8	Benzanamine,3-(Trifluoromethyl)	500	10025-73-7	Chromic Chloride	1
100-14-1	Benzne,1-(Chloromethyl)-4-Nitro-	500	62207-76-5	Cobalt, ((2,2'-(1,2-Ethanedylbis (Nitriomethylidyne)) Bis(6- Fluorophenolato))(2-)-N,N',O,O')-	100
98-05-5	Benzeneearsonic Acid	10	10210-68-1	Cobalt Carbonyl	10
3615-21-2	Benzimidazole,4,5-Dichloro-2- (Trifluoreomethyl)-	500	64-86-8	Colchicine	10
98-07-7	Benzotrighloride	100	56-72-4	Coumaphos	100
100-44-7	Benzyl Chloride	500	5836-29-3	Coumatetralyl	500
140-29-4	Benzyl Cyanide	500	95-48-7	Cresol, o-	1000
15271-41-7	Bicyclo[2.2.1]Heptane-2 Carbonitrile,5-Chloro-6- (((Methylamino)Carbonyl)Oxy) Imino)-,(1s-(1-alpha,2-beta,4- Alpha,5-alpha,6E))-	500	535-89-7	Crimidine	100
534-07-6	Bis(Cholromethyl)Keton	10	4170-30-3	Crotonaldehyde	1000
4044-65-9	Bitoscante	500	123-73-9	Crotonaldehyde, (E)-	1000

<u>CAS #</u>	<u>CHEMICAL NAME</u>	<u>TPQ</u>	<u>CAS #</u>	<u>CHEMICAL NAME</u>	<u>TPQ</u>
506-68-3	Cyanogen Bromide	500	75-21-8	Ethylene Oxide	1000
506-78-5	Cyanogen Iodid	1000	107-15-3	Ethylenediamine	10000
2636-26-2	Cyanophos	1000	151-56-4	Ethyleneimine	500
675-14-9	Cyanuric Fluoride	100	542-90-5	Ethylthiocyanate	10000
66-81-9	Cycloheximide	100	22224-92-6	Fenamiphos	10
108-91-8	Cylohexylamine	10000	115-90-2	Fensulfthion	500
17702-41-9	Decarborane(14)	500	430-50-2	Fluenetil	100
8065-48-3	Demeton	500	7782-41-4	Fluorine	500
919-86-8	Dementon-S-Methyl	500	640-19-7	Fluoroacetamide	100
10311-84-9	Dialifor	100	144-49-0	Fluoroacetic Acid	10
109287-45-7	Diborane	100	359-06-8	Fluoroacetyl Chloride	10
111-44-4	Dichloroethyl Ether	10000	51-21-8	Fluorouracil	500
149-74-6	Dichloromethylphenylsilane	1000	944-22-9	Fonofos	500
62-73-7	Dichlorvos	1000	50-00-0	Formaldehyde	500
141-66-2	Dicrotophos	100	107-16-4	Formaldehyde Cyanohydrin	1000
1464-53-5	Diepoxybutane	500	23422-53-9	Formetanate Hydrochloride	500
814-49-3	Diethyl Chlorophosphate	500	2540-82-1	Formothion	100
71-63-6	Digitoxin	100	17702-57-7	Formparanate	100
2238-07-5	Diglycidyl Ether	1000	21548-32-3	Fosthietan	500
20830-75-5	Digoxin	10	3878-19-1	Fuberidazole	100
115-26-4	Dimefox	500	110-00-9	Furan	500
60-51-5	Dimethoate	500	13450-90-3	Gallium Trichloride	500
2524-30-0	Dimethyl Phosphorochloriodothioate	500	77-47-4	Hexachlorocyclopentadiene	100
77-78-1	Dimethyl Sulfate	500	4835-11-4	Hexamethylenediamine,N,N'-Dibutyl-	500
75-78-5	Dimethyldichlorosilane	500	302-01-2	Hydrazine	1000
57-14-7	Dimethylhydrazine	1000	74-90-8	Hydrocyanic Acid	100
99-98-9	Dimethyl-p-Phenylenediamine	10	7647-01-0	Hydrogen Chloride (gas only)	500
644-64-4	Dimetilan	500	7664-39-3	Hydrogen Fluoride	100
534-52-1	Dinitrocresol	10	7722-84-1	Hydrogen Peroxide (Conc>52%)	1000
88-85-7	Dinoseb	100	7783-07-5	Hydrogen Selinide	10
1420-07-1	Dinoterb	500	7783-06-4	Hydrogen Sulfide	500
78-34-2	Dioxathion	500	123-31-9	Hydroquinone	500
82-66-6	Diphacinone	10	13463-40-6	Iron, Pentacarbonyl-	100
152-16-9	Diphosphoramidate, Octamethyl-	100	297-78-9	Isobenzan	100
298-04-4	Disulfoton	500	78-82-0	Isobutyronitrile	1000
514-73-8	Dithiazanine Iodide	500	102-36-3	Isocyanic Acid, 3,4-	500
541-53-7	Dithiobiuret	100		Dichlorophenyl Ester	
316-42-7	Emetine, Dihydrochloride	1	465-73-6	Isodrin	100
115-29-7	Endosulfan	10	55-91-4	Isofluorphate	100
2778-04-3	Endothion	500	4098-71-9	Isophorone Diisocyanate	100
72-20-8	Endrin	500	108-23-6	Isopropil Chloroformate	1000
106-89-8	Epichlorohydrin	1000	119-38-0	Isopropylmethylpyrazolyl Dimethylcarbamate	500
2104-64-5	EPN	100			
50-14-6	Ergocalciferol	1000	78-97-7	Lactonitrile	1000
379-79-3	Ergotamine Tartrate	500	21609-90-5	Leptophos	500
1622-32-8	Ethanesulfonyl Chloride, 2 Chloro-	500	541-25-3	Lewisite	10
10140-87-1	Ethanol,1,2-Dichloro-,Acetate	1000	58-89-9	Lindane	1000
563-12-1	Ethion	1000	7580-67-8	Lithium Hydride	100
13194-48-4	Ethoprophos	1000	109-77-3	Melonitrile	500
538-07-8	Ethylbis(2-Chloroethyl)Amine	500	12108-13-3	Manganese, Tricarbonyl Methylcyclopentadienyl	100
371-62-0	Ethylene Fluorohydrine	10			

<u>CAS #</u>	<u>CHEMICAL NAME</u>	<u>TPQ</u>	<u>CAS #</u>	<u>CHEMICAL NAME</u>	<u>TPQ</u>
51-75-2	Mechlorethamine	10	2497-07-6	Oxidisulfoton	500
950-10-7	Mephosfolan	500	10028-15-6	Ozone	100
1600-27-7	Mercuric Acetate	500	1910-42-5	Paraquat Dichloride	10
7487-94-7	Mercuric Chloride	500	2074-50-2	Paraquat Methosulfate	10
21908-53-2	Mercuric Oxide	500	56-38-2	Parathion	100
10476-95-6	Methacrolein Diacetate	1000	298-00-0	Parathion-Methyl	100
760-93-0	Methacrylic Anhydride	500	12002-03-8	Paris Green	500
126-98-7	Methacrylonitrile	500	19624-222-7	Pentaborane	500
920-46-7	Methacryloyl Chloride	100	2570-26-5	Pentadecylamine	100
30674-80-7	Methacryloyloxyethyl Isocyanate	100	79-21-0	Peracetic Acid	500
10265-92-6	Methamidophos	100	594-42-3	Perchloromethylmercaptan	500
558-25-8	Methanesulfonyl Fluoride	1000	108-95-2	Phenol	500
950-37-8	Methidathion	500	4418-66-0	Phenol, 2,2'-Thiobis(4-Chloro-6-Methyl)-	100
2032-65-7	Methiocarb	500	64-00-6	Phenol,3-(1-Methylethyl)-Methylcarbomate	500
16752-77-5	Methomyl	500	58-36-6	Phenoxarsine,10,10'-Oxydi-	500
151-38-2	Methoxyethylmercuric Acetate	500	696-28-6	Phenyl Dichloroarsine	500
80-63-7	Methyl 2-Chroacrylate	500	59-88-1	Phenylhydrazine Hydrochloride	1000
74-83-9	Methyl Bromide	1000	62-38-4	Phenylmercury Acetate	500
79-22-1	Methyl Chloroformate	500	2097-19-0	Phenylsilatrane	100
60-34-4	Methyl Hydrazine	500	103-85-5	Phenylthiourea	100
624-83-9	Methyl Isocyanate	500	298-02-2	Phorate	10
556-61-6	Methyl Isothiocyanate	500	4104-14-7	Phosacetim	100
74-93-1	Methyl Mercaptan	500	947-02-4	Phosfolan	100
3735-23-7	Methyl Phenkapton	500	75-44-5	Phosgene	10
676-97-1	Methyl Phosphonic Dichloride	100	732-11-6	Phosmet	10
556-64-9	Methyl Thiocyanate	10000	13171-21-6	Phosphamidon	100
78-94-4	Methyl Vinyl Ketone	10	7803-51-2	Phosphine	500
502-39-6	Methylmercuric Dicyanamid	500	2703-13-1	Phosphonothioic Acid Methyl-O-Ethyl O-(4-(Methylthio)Phenyl) Ester	500
75-79-6	Methyltrichlorosilane	500	50782-69-9	Phosphonothioic Acid, Methyl-S-(2(Bis(1-Methylethyl)Amino)Ethyl)O-Ethyl Ester	100
1129-41-5	Metolcarb	100	2665-30-7	Phosphonothioic Acid, Methyl-O(4-Nitrophenyl)O-Phenyl Ester	500
7786—34-7	Mevinphos	500	3254-63-5	Phosphoric Acid, Dimethyl 4-(Methylthio)Phenyl Ester	500
315-18-4	Mexacarbate	500	2587-90-8	Phosphorothioic Acid, O,O-Dimethyl-S-(2-Methylthio) Ethyl Ester	500
50-07-7	Mitomycin C	500	7723-14-0	Phosphorus	100
6923-22-4	Monocrotophos	10	10025-87-3	Phosphorus Oxychloride	500
2763-96-4	Muscimol	500	10026-13-8	Phosphorus Pentachloride	500
505-60-2	Mustard Gas	500	7719-12-2	Phosphorus Trichloride	1000
13463-39-3	Nickel Carbonyl	1	57-47-6	Physostigmine	100
54-11-5	Nicotine	100	57-64-7	Physostigmine, Salicylate (1:1)	100
65-30-5	Nicotine Sulfate	100	124-87-8	Picrotoxin	500
7697-37-2	Nitric Acid	1000	110-89-4	Piperidine	1000
10102-43-9	Nitric Oxide	100	23505-41-1	Pirimifos-Ethyl	1000
98-95-3	Nitrobenzene	10000			
1122-60-7	Nitrocyclohexane	500			
10102-44-0	Nitrogen Dioxide	100			
62-75-9	Nitrosodimethylamine	1000			
991-42-4	Norbormide	100			
0	Organo-rhodium Complex (PMN-82-147)	10			
630-60-4	Ouabain	100			
23135-22-0	Oxamyl	100			
78-71-7	Oxetane, 3,3Bis(Chloromethyl)	500			

<u>CAS #</u>	<u>CHEMICAL NAME</u>	<u>TPQ</u>	<u>CAS #</u>	<u>CHEMICAL NAME</u>	<u>TPQ</u>
10124-50-2	Potassium Arsenite	500	10031-59-1	Thallium Sulfate	100
151-50-8	Potassium Cyanide	100	6533-73-9	Thallos Carbonate	100
506-61-6	Potassium Silver Cyanide	500	7791-0	Thallos Chloride	100
2631-37-0	Promecarb	500	2757-18-8	Thallos Malonate	100
106-96-7	Propargyl Bromide	10	7446-18-6	Thallos Sulfate	100
57-57-8	Propiolactone, Beta-	500	2231-57-4	Thiocarbazide	1000
107-12-0	Propionitrile	500	39196-18-4	Thiofanox	100
542-76-7	Propionitrile, 3-Chloro-	1000	297-97-2	Thionazin	500
70-69-9	Propiophenone, 4-Amino-	100	108-98-5	Thiophenol	500
109-61-5	Propyl Chloroformate	500	79-19-6	Thiosemicarbazide	100
75-56-9	Propylene Oxide	10000	5344-82-1	Thiourea, (2-Chlorophenyl)-	100
75-55-8	Propyleneimine	10000	614-78-8	Thiourea, (2-Methylphenyl)-	500
2275-18-5	Prothoate	100	7550-45-0	Titanium Tetrachloride	100
129-00-0	Pyrene	1000	584-84-9	Toluene 2,4-Diisocyanate	500
140-76-1	Pyridine, 2-Methyl-5-Vinyl-	500	91-08-7	Toluene 2,6-Diisocyanate	100
504-24-5	Pyridine, 4-Animo-	500	110-57-6	Trans-1,4-Dichlorobutene	500
1124-33-0	Pyridine, 4-Nitro-,l-Oxide	500	1031-47-6	Triamiphos	500
53558-25-1	Piiminil	100	24017-47-8	Triazofos	500
14167-18-1	Salcomine	500	76-02-8	Trichloroacetyl Chloride	500
107-44-8	Sarin	10	115-21-9	Trichloroethylsilane	500
7783-00-8	Selenious Acid	1000	327-98-0	Trichloronate	500
7791-23-3	Selenium Oxychloride	500	98-13-5	Trichlorophenylsilane	500
563-41-7	Semicarbazide Hydrochloride	1000	1558-25-4	Trichloro(Chloromethyl)Silane	100
3037-72-7	Silane, (4-Aminobutyl) Diethoxymethyl-	1000	27137-85-5	Trichloro(Dichlorophenyl) Silane	500
7631-89-2	Sodium Arsenate	1000	998-30-1	Triethoxysilane	500
7784-46-5	Sodium Arsenite	500	75-77-4	Trimethylchlorosilane	1000
26628-22-8	Sodium Azide (Na(N(3)))	500	824-11-3	Trimethylpropane Phosphite	100
124-65-2	Sodium Cacodylate	100	1066-45-1	Trimethylin Chloride	500
143-33-9	Sodium Cyanide (Na(CN))	100	639-58-7	Triphenyltin Chloride	500
62-74-8	Sodium Fluoroacetate	10	555-77-1	Tris(2-Chloroethyl)Amine	100
13410-01-0	Sodium Selenate	100	2001-95-8	Valinomycin	1000
10102-18-8	Sodium Selenite	100	1314-62-1	Vanadium Pentoxide	100
10102-20-2	Sodium Tellurite	500	108-05-4	Vinyl acetate Monomer	1000
900-95-8	Stannane, Acetoxytriphenyl	500	81-81-2	Warfarin	500
57-24-9	Strychine	100	129-06-6	Warfarin Sodium	100
60-41-3	Strychinine Sulfate	100	28347-13-9	Xylylene Dichloride	100
3689-24-5	Sulfotep	500	58270-08-9	Zinc, Dichloro(4,4-Dimethyl-5((( (Methylamino)Carbonyl)Oxy) Imino)Pentanenitrile-, (T-4)-	100
3569-57-1	Sulfoxide, 3-Chloropropyl Octyl	500	1314-84-7	Zinc Phosphide	500
7446-09-5	Sulfur Dioxide	500			
7783-60-0	Sulfur Tetrafluoride	100			
746-11-9	Sulfur Trioxide	100			
766-93-9	Sulfuric Acid	1000			
77-81-6	Tabun	10			
7783-80-4	Tellurium Hexafluoride	100			
107-49-3	TEPP	100			
13071-79-9	Terbufos	100			
78-00-2	Tetraethyllead	100			
597-64-8	Tetraethyltin	100			
75-74-1	Tetramethyllead	100			
509-14-8	Tetranitromethane	500			

# NOTICE TO EMPLOYEES

The Texas Hazard Communication Act (revised 1993), codified as Chapter 502 of the Texas Health and Safety Code, requires public employers to provide employees with specific information on the hazards of chemicals to which employees may be exposed in the workplace. As required by law, your employer must provide you with certain information and training. A brief summary of the law follows.

## WORKPLACE CHEMICAL LIST

Employers must develop a list of hazardous chemicals used or stored in the workplace in excess of 55 gallons or 500 pounds. This list shall be updated by the employer as necessary, but at least annually, and made readily available for employees and their representatives on request.

## MATERIAL SAFETY DATA SHEETS

Employees who may be exposed to hazardous chemicals shall be informed of the exposure by the employer and shall have ready access to the most current material safety data sheets, which detail physical and health hazards and other pertinent information on those chemicals.

## EMPLOYEE EDUCATION PROGRAM

Covered employees shall receive training by the employer on the hazards of the chemicals and on measures they can take to protect themselves from those hazards, and shall be provided with appropriate personal protective equipment. This training shall be provided as needed. Employers shall also provide training to new or newly assigned employees before the employees work with or in a work area containing a hazardous chemical.

## LABELS

Employees shall not be required to work with hazardous chemicals from unlabeled containers, except portable containers for immediate use, the contents of which are known to the user.

## EXEMPTIONS

The following chemicals are exempt from coverage by this act: articles that do not normally release hazardous chemicals, food, drugs, cosmetics, hazardous waste, tobacco and tobacco products, wood or wood products, consumer products used in the same manner as normal consumer use, and radioactive waste.

## REPORTING FATALITIES OR INJURIES

Employers must report to the department within 48 hours the occurrence of a chemical accident that results in one or more employee fatalities or results in the hospitalization of five or more employees.

## EMPLOYEE RIGHTS

Employees may file complaints with the Texas Department of Health at the toll free number below, and may not be discharged or discriminated against in any manner for the exercise of any rights provided by this act.

**EMPLOYERS MAY BE SUBJECT TO ADMINISTRATIVE PENALTIES AND CIVIL OR CRIMINAL FINES RANGING FROM \$50 TO \$100,000 FOR EACH VIOLATION OF THIS ACT.**

Further information may be obtained from:

Texas Department of Health      1-800-452-2791  
Toxic Substance Control Division      (512) 834-6603  
Hazard Communication Branch  
1100 West 49<sup>th</sup> Street  
Austin, Texas 78756

This notice is subject to approval by the Texas Board of Health







## WORK AREA CHEMICAL INVENTORY FORM INSTRUCTIONS

All hazardous chemicals (**regardless of the quantity**) must be listed on the **Work Area Chemical Inventory Form**. The hazardous chemicals or products shall be listed by the same name that is on the label and on the MSDS. This form must be updated and available by November 1st of each year or upon request. Each Department shall maintain a copy of each inventory form and these shall be readily accessible to employees. **Complete one form per work area. Duplicate forms as necessary to list all hazardous chemicals present in the work area. Place all appropriate information on the form in the space provided.**

- Identity** - Place in this column the name of the material as it appears on the container's label and/or MSDS.
- Chemical Contents** - If you are reporting a mixture of chemicals, place as many of the chemical names (shown on the MSDS) as you can in the space provided. When reporting a mixture with a generic name, such as gasoline, diesel, kerosene, etc., the individual ingredients do not have to be listed. If the product you are reporting has a trade secret formula, the generic name (provided on the MSDS) may be used, such as "petroleum distillates". If the MSDS does not provide a generic chemical name, the words "Trade Secret" may be used.
- CAS Number** - Place the Chemical Abstract Service (CAS) Number of the substance in this column. If the substance/mixture does not have a CAS Number, place the CAS Number of the primary hazardous ingredient.
- Container Type** - Use one or more of the following letters in this column to describe the storage container for the hazardous chemical:

A. Above Ground Tank	G. Carboy	M. Glass Bottles/Jugs
B. Below Ground Tank	H. Silo	N. Plastic Bottles/Jugs
C. Tank Inside Building	I. Fiber Drum	O. Tote Bin
D. Steel Drum	J. Bag	P. Tank Wagon
E. Plastic/non-metallic drum	K. Box	Q. Rail Car
F. Can	L. Cylinder	R. OTHER
- Chemical Hazards** - Use one of the following Roman numerals in this column to describe the **primary hazard category** for the hazardous chemical. These categories are defined using key words (*italicized*) found on either the product label or the MSDS.
  - I. Fire Hazard**- includes products which are *flammable, combustible liquid, pyrophoric*, and/or an *oxidizer*.
  - II. Pressure Hazard**- includes products which are *explosive* or *compressed gases*.
  - III. Reactivity Hazard**- includes products which are *unstable reactives, organic peroxides*, and/or *water reactive*.
  - IV. Acute (immediate) Health Hazards**- includes products which are *highly toxic, corrosive, toxic, irritants, sensitizers*, and other hazardous chemicals which cause an *adverse effect to a target organ within a short period of time*.
  - V. Chronic (delayed) Health Hazard**- Includes products which are *carcinogens, mutagens, or teratogens*, and other hazardous chemicals which cause an *adverse effect on target organ after a long period of time*.
- Quantity or Amount** - Place in this column the maximum amount (in pounds) of each hazardous chemical stored on any one day during the year. To convert liquid measure to pounds: **number of gallons times Specific Gravity of chemical times 8.34 pounds/gallon** (the density of water). To convert gas measurements to pounds, you will need to obtain the conversion factor (for cubic feet to pounds) for the individual chemical.

Appendix V

**Texas A&M International University  
Hazard Communication Program  
Training Record**

In compliance with the Texas Hazard Communication Act, an employee who will work with hazardous chemicals will receive safety training that includes:

**GENERAL AND CHEMICAL SAFETY TRAINING:**

1. \_\_\_\_\_ Information on interpreting labels and Material Safety Data Sheets and the relationships between those two methods of hazard communication.
2. \_\_\_\_\_ General Methods of Obtaining MSDS's at TAMIU.
3. \_\_\_\_\_ Generic information on Hazardous Chemicals (flammables, corrosives, poisons/toxins, reactives, carcinogens irritants)
  - a. \_\_\_\_\_ Hazards associated with chemical hazard groups including acute and chronic effects.
  - b. \_\_\_\_\_ Methods for identifying specific chemicals within each chemical hazard group (e.g. DOT labels, NFPA 704 System, chemical container labels).
  - c. \_\_\_\_\_ Safe Handling and storage procedures for hazardous chemicals; including separation of incompatibles.
4. \_\_\_\_\_ Proper use of appropriate personal protective equipment to minimize exposure to hazardous chemicals.
5. \_\_\_\_\_ First aid treatment to be used with respect to hazardous chemicals to which the employee may be exposed.
6. \_\_\_\_\_ General instructions of spill cleanup procedures.
7. \_\_\_\_\_ Proper waste disposal procedures for hazardous chemicals.

\_\_\_\_\_  
Instructor Name (Print)

\_\_\_\_\_  
Date

**WORK AREA SPECIFIC TRAINING:**

1. \_\_\_\_\_ Information on hazardous chemicals known to be present in the employees work area and to which the employee may be exposed, including:
  - a. \_\_\_\_\_ Location within the work area.
  - b. \_\_\_\_\_ Specific hazards, including acute and chronic effects.
  - c. \_\_\_\_\_ Safe handling procedures.
2. \_\_\_\_\_ Work area location of MSDSs or procedures for obtaining MSDSs.
3. \_\_\_\_\_ How to obtain and use appropriate personal protection equipment.
4. \_\_\_\_\_ First aid treatment to be used with respect to the hazardous chemicals.
5. \_\_\_\_\_ Location of emergency equipment (e.g., fire extinguisher, eyewash/shower)
6. \_\_\_\_\_ Instructions on spill cleanup procedures, and proper disposal of hazardous chemical specific to that work area.

\_\_\_\_\_  
Instructor Name (Print)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Employee Name (Print)

\_\_\_\_\_  
Employee Department

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

\_\_\_\_\_  
Date