Texas A&M Health Science Center

Hazard Communication Program

Provided by:

Environmental Health & Safety
## Review & Summary of Changes

<table>
<thead>
<tr>
<th>Year</th>
<th>Changes Made</th>
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<tbody>
<tr>
<td>2009</td>
<td>Hazard Communication Program</td>
</tr>
<tr>
<td>2013</td>
<td>Changed formatting; revised and updated information throughout; added regulatory references; added sections on Reporting Employee Deaths and Injuries and on Personal Protective Equipment; removed section on Tier II Report; revised Training Documentation Form; revised Chemical Inventory Worksheet and Instructions; revised Workplace Chemical List Template; added information on Chemical Labeling Systems</td>
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<tr>
<td>2014</td>
<td>Updated HSC Logo on the Title Page; corrected typographical errors in spelling and punctuation; added definition for “Asphyxiation”</td>
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Reviewed by:  **Nancy L. Eaker**  
Laboratory Safety Manager  
Environmental Health & Safety  
Date:  **March 18, 2014**
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I. INTRODUCTION AND GENERAL INFORMATION

A. The Texas Hazard Communication Act (THCA), as revised in 1993 and codified in Chapter 502 of the Texas Health and Safety Code (HSC), requires public employers to provide information to employees regarding hazardous chemicals to which they may be exposed in the workplace.

B. The Texas A&M Health Science Center (TAMHSC) has established and implements this written Hazard Communication (HazCom) Program in order to comply with Section 502.009(b) of the THCA and with Section 295.7(a) of the THCA Rules (Title 25 of the Texas Administrative Code (TAC) Section 295.1-295.12).

C. The master copy of the written hazard communication program will be maintained by the TAMHSC Environmental Health & Safety (EHS) office. A copy of the written program is available on the EHS webpage, and a copy must be accessible at each workplace.

II. DUTIES AND RESPONSIBILITIES

A. The Unit Head will administer and coordinate the HazCom Program in each of their Departments as follows:
   1. Ensure implementation and compliance with the TAMHSC HazCom Program in their Division, Institute, Center, or Department.
   2. Ensure work area chemical inventories are compiled annually and submitted to EHS via the Chemical Inventory Program.
   3. Maintain chemical safety training records for each employee for a minimum of 5 years.
   4. Allow the local Fire Department to conduct on-site inspections upon request.
   5. Provide employees with appropriate personal protective equipment (PPE) as outlined under Section XI of this program.
   6. Inform employees of any non-routine chemical exposure.
   7. Maintain a copy of the TAMHSC Hazard Communication Program for review by employees.

B. Environmental Health & Safety (EHS) will:
   1. Make available to each TAMHSC unit the official Notice to Employees (see Appendix B) to post at locations where notices are normally posted.
2. Compile workplace chemical lists from the submitted work area chemical inventories and maintain a copy of each list for 30 years.
3. Provide a copy of the workplace chemical list to employees upon request.
4. Assist Unit Heads with implementation of and compliance with this Program.
5. Provide General Hazard Communication Training as described in Section VIII of this Program.

C. **Supervisors** will:
1. Ensure that all employees receive appropriate Hazard Communication training before working with or in an area containing hazardous chemicals.
2. Provide Work Area Specific training to the employees under their supervision as described in Section VIII of this Program.
3. Provide to the Unit Head all Hazard Communication training records upon request. (See Appendix C for Training Documentation forms.)
4. Inform employees regarding the procedures for accessing **Safety Data Sheets (SDSs)** and for obtaining the workplace chemical list.
5. Update the work area chemical inventory whenever a new hazardous chemical or an additional quantity above 55 gallons or 500 pounds is purchased.
6. Ensure that all accidents involving hazardous chemicals are reported to Environmental Health and Safety, regardless of whether or not someone was injured.

D. **Individual Employees** will:
1. Attend appropriate Hazard Communication training.
2. Use prudent practices and good judgment when using hazardous chemicals or hazardous procedures.
3. Request additional training when needed for a particular chemical or chemical procedure.
4. Wear appropriate PPE when using hazardous chemicals or hazardous procedures.
5. Notify other individuals who might be affected by the chemicals they use.

*Note: Personnel who work with hazardous materials assume reasonable responsibility for the safety and health of themselves, others around them, and the environment.*

III. **EXEMPTIONS (HSC §502.004)**

A. The provisions of this Program do not apply to chemicals in the following categories:
1. Hazardous waste regulated by the Texas Commission on Environmental Quality (TCEQ) and/or by the Environmental Protection Agency 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 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 and/or that are intended for personal consumption by an employee while in the workplace.

6. 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.

7. Radioactive waste

8. A hazardous chemical in a sealed and labeled package that is received and subsequently sold or transferred in that package, and
   a) The seal and label remain intact while the item remains in the workplace;
   b) The chemical does not remain in the workplace more than five working days;
   c) Employee training requirements are met; and
   d) The chemical is not an extremely hazardous substance at or above the threshold planning quantity or a quantity of 55 gallons or 500 pounds, whichever is less.

IV. NON-ROUTINE EXPOSURE

A. Planned Releases
   1. Parties that are responsible for the planned release of hazardous or noxious chemicals, such as paint vapors produced during renovations in the workplace, will:
      a) Notify all individuals in the affected area(s) as well as EHS.
      b) Provide to EHS the appropriate precautionary information, including SDSs for the chemicals involved.
      c) Ensure, with the input and/or assistance of EHS, that individuals in the affected area are provided information on the hazards of the chemicals, measures that they can take to protect themselves from those hazards, and access to appropriate SDSs.
B. Accidental Releases

1. Parties that are responsible for the accidental release of hazardous or noxious chemicals will:
   a) Immediately notify EHS and individuals in the affected area(s) of the release.
   b) Evacuate the affected area(s) as necessary.
   c) Provide to EHS and to any emergency responders the appropriate hazard information, including SDSs for the chemicals involved.

2. EHS will:
   a) Implement emergency response procedures for a chemical release.
   b) Provide hazard information to emergency responders and to employees in the affected areas as appropriate.

V. POSTING THE NOTICE TO EMPLOYEES (HSC §502.017 and 25 TAC §295.12)

A. As per the requirements of Section 502.017(a) of the THCA, the Texas A&M Health Science Center will post and maintain in all workplaces where hazardous chemicals are used or stored the most current, official version of the Texas Department of State Health Services Notice to Employees, informing employees of their rights under the THCA. (See Appendix B)

B. The Notice to Employees shall be clearly posted and unobstructed at all locations in the workplace where notices are normally posted, and with at least one location in each workplace.

C. In workplaces where employees that have difficulty reading or understanding English may be present, a copy of the Notice, printed in Spanish, will be posted together with the English version of the Notice. (See Appendix B)

D. Additional copies of the Notice, both in English and in Spanish, are available on the DSHS website at:

VI. MAINTAINING THE RIGHTS OF THE EMPLOYEE (HSC §502.017 and 25 TAC §295.12)

A. The Texas A&M Health Science Center shall not discipline, harass, or discriminate against any employee for filing complaints, assisting DSHS inspectors, participating in proceedings related to the THCA, or exercising any rights under the THCA.
B. Employees cannot waive their rights under the THCA, and a request or requirement by the TAMHSC for such a waiver is a violation of the Act.

VII. REPORTING EMPLOYEE DEATHS AND INJURIES (HSC §502.012 and 25 TAC §295.9)

A. The Texas A&M Health Science Center will notify the Texas Department of State Health Services, Division of Regulatory Services, Enforcement Unit, of any employee accident on a TAMHSC campus that involves a hazardous chemical exposure or asphyxiation and that is fatal to one or more employees or that results in the hospitalization of five or more employees.

B. The Director of Environmental Health & Safety will be responsible for reporting all such accidents to the Texas Department of State Health Services, Division of Regulatory Services, Enforcement Unit, within 48 hours after their occurrence. Notifications will be made either orally or in writing to:

Texas Department of State Health Services  
Division of Regulatory Services, Enforcement Unit  
1100 West 49th Street  
Austin, Texas 78756  
Phone: (512) 834-6665  
Fax: (512) 834-6606

C. Employees will be responsible for reporting all accidents involving a hazardous chemical to their supervisor.

D. Supervisors will be responsible for reporting all accidents involving a hazardous chemical to Environmental Health & Safety and the Office of Risk Management and for following TAMHSC procedures for First Report of Injury.

VIII. CHEMICAL SAFETY TRAINING (HSC §502.009 and 25 TAC §295.7)

A. Employee education and training are essential components of the TAMHSC’s Hazard Communication Program. Chemical safety training (also called Hazard Communication Training) will be provided to employees who use or handle hazardous chemicals or who work in areas containing hazardous chemicals. Training will be provided:

1. To all new or newly assigned employees before the employee begins work with or in a work area containing hazardous chemicals.

2. When the potential for exposure to hazardous chemicals in the employee’s work area increases significantly.

3. When a new hazard is introduced.

4. When the employer receives new and significant information concerning the hazards of a chemical in the employee’s work area.
B. EHS will be responsible for assuring that online general hazard communication training is available to all TAMHSC employees.

C. The employee’s supervisor will

1. Ensure that their employees take the general hazard communication training made available by EHS.
2. Providing appropriate work area specific chemical safety training to the employee.
3. Ensure that all covered employees are identified and incorporated into the training program.
4. Provide employees with information concerning the hazardous chemicals to which they may be exposed during the performance of non-routine tasks.
5. Train new employees and confirm the employee’s understanding of the training prior to requiring them to use or handle a hazardous chemical.

D. Topics for general and/or work area specific chemical safety training, as noted, will include:

1. Interpreting SDSs and chemical container labels, and the relationship between the two methods of hazard communication. (General)
2. Methods for identifying the hazard group or category to which a specific chemical belongs (e.g., Globally Harmonized System (GHS), NFPA 704 system, and/or Hazardous Material Information System (HMIS®)). (General)
3. The location of hazardous chemicals present in the employee’s work area(s). (Work Area Specific)
4. Hazards associated with applicable categories of hazardous chemicals, including physical hazards and acute and chronic health effects. (General and Work Area Specific)
5. Safe handling procedures for hazardous chemicals, including proper storage and separation of incompatibles. (Work Area Specific)
6. Location, selection, use, and care of appropriate personal protective equipment (PPE) to minimize exposure to hazardous chemicals. (Work Area Specific)
7. First aid treatment for exposure to hazardous chemicals. (Work Area Specific)
8. Instructions on handling, spill cleanup, and proper disposal of hazardous chemicals. (Work Area Specific)

E. A record of each employee training session is required. Training records will be maintained by the employee’s supervisor and/or unit for at least five years and will include:

1. The date of the training session.
2. A legible attendance roster of all employees attending the training session.
3. Specific topics covered (see Section D above) and the names of the chemicals or categories of chemicals covered.
4. The name(s) of the instructor(s).

Note: Use the Employee Hazard Communication Training Roster in Appendix C to comply with this requirement.

F. The need and frequency for periodic or refresher training is assessed.

G. Employees subject to these training requirements will sign an attendance roster for each training session attended, verifying that they received and understood the information.

IX. SAFETY DATA SHEETS (HSC §502.006 and 25 TAC §295.5)

A. Safety Data Sheets (SDSs), formerly known as Material Safety Data Sheets (MSDSs), are legal documents that provide hazard information on chemicals or chemical products produced or distributed in the United States.

B. Each unit of the Texas A&M Health Science Center shall keep a readily available file of current and appropriate SDSs for all hazardous chemicals purchased and used at that unit.
   1. The electronic SDS database maintained by EHS shall be used for this purpose.
   2. Printed copies of SDSs may also be kept on file.

C. Each Unit Head will identify a person or persons within that TAMHSC unit who will be responsible for the SDS system for that unit. The responsible person(s) will ensure that:
   1. The SDSs received by that unit are submitted to the Campus Safety Officer for inclusion in the electronic SDS database.
   2. Incoming SDSs are reviewed for new and significant health and safety information and that any new information is passed on to the affected employees.
   3. Hazardous chemicals received without an SDS are withheld from use until a current SDS is obtained.
   4. Missing SDSs are requested and/or obtained from an appropriate source within 30 days from receipt of the hazardous chemical. SDSs may be obtained from the chemical manufacturer or distributor or from an electronic database, such as those linked on the TAMHSC EHS webpage.
5. Affected employees are provided a description of any alternative systems being used in addition to the EHS maintained electronic database, such as hard copy SDSs.

6. Emergency responders are provided with the appropriate SDS as soon as practical upon request.

D. SDSs will be readily available for review by employees or their designated representatives upon request.

X. CHEMICAL CONTAINER LABELS (HSC §502.007 and 25 TAC §295.6)

A. All containers of chemicals used or stored by the Health Science Center shall be properly labeled.

1. **Primary containers** of hazardous chemicals must be clearly labeled in English and must at a minimum include:
   a) The identity of the chemical as it appears on the SDS.
   b) Appropriate hazard warnings, such as the key word of the chemical hazard (e.g., “poison,” “flammable,” “corrosive,” or “carcinogen”) and/or GHS pictograms.

2. As of June 1, 2015, the labels on all primary containers shall include:
   a) The **Product identifier** (chemical name) as it appears in the SDS
   b) A **Signal word**
   c) Hazard **statement(s)**
   d) Pictogram(s)
   e) **Precautionary statement(s)**
   f) The manufacturer’s name, address, and telephone number

3. Labels on primary containers of hazardous chemicals shall not be removed or defaced unless they are illegible, inaccurate, or do not conform to the OSHA standard or other labeling requirements. If a primary container label is removed or missing, the container shall be relabeled as described in Section X.A.2.

4. **Secondary containers** of hazardous chemicals must be clearly labeled to include:
   a) The product identifier
   b) Any combination of words, pictures, pictograms, etc., that provides at minimum general information regarding the hazards of the chemicals and that, when used in conjunction with other information available to the employee, will provide specific information regarding the hazards of the chemical.

5. Portable secondary containers intended for immediate use (that is, for use within a work shift) by the employee who performs the transfer may be labeled with only the contents of the container.
6. Descriptions of the following nationally recognized labeling systems are provided in Appendix D.
   a) The Globally Harmonized System (GHS)
   b) The National Fire Protection Association (NFPA) 704 Standard
   c) The Hazardous Material Information System (HMIS®)

7. A description of any alternative labeling systems that may be used by the unit is provided to employees.

B. EHS will monitor to verify that the chemical labeling system requirements of this program are followed.

XI. PERSONAL PROTECTIVE EQUIPMENT (HSC §502.017 and 25 TAC §295.12)

A. All TAMHSC Unit Heads will be responsible for ensuring that appropriate personal protective equipment (PPE) is provided to all employees who use or handle hazardous chemicals.

B. The employee’s supervisor will assume overall responsibility for ensuring that appropriate equipment and training are provided to his/her employees, including the following:
   1. Proper selection of PPE based on:
      a) Routes of entry
      b) Permeability of PPE material
      c) Duties being performed by the employee
      d) Hazardous chemicals in use or present in the work area
   2. Proper fit and functionality of PPE as described by the manufacturer’s specifications
   3. Appropriate maintenance and storage of PPE

   Note: Please contact EHS if assistance is required in determining appropriate PPE. Frequently those working with chemicals don’t know the proper PPE to select, are wearing inappropriate PPE, or are wearing PPE incorrectly.

C. Appropriate PPE shall be worn by an employee anytime that employee is working with or handling hazardous chemicals. The minimum PPE required for laboratories is as follows:
   1. Lab coat
   2. Appropriate gloves
   3. Chemical splash goggles (for hazardous liquid chemicals) or safety glasses (for hazardous solid chemicals, compressed gasses, and impact hazards)
   4. Closed-toe shoes

D. Appropriate PPE shall be worn by any employee that is in an area immediately adjacent to an area in which hazardous chemicals are in use. At a minimum, the
appropriate PPE for laboratories shall include a lab coat, safety glasses, and closed-toe shoes.

E. Any employee that is working in an area in which respiratory protection is required must contact EHS to enroll in the TAMHSC’s Occupational Health Program and to be fit tested for a respirator.

XII. WORKPLACE CHEMICAL LISTS (HSC §502.005 and 25 TAC §295.4)

A. The Texas A&M Health Science Center will develop and maintain a list of hazardous chemicals normally present in the workplace in excess of 55 gallons or 500 pounds. This workplace chemical list will be developed for each workplace where such quantities of hazardous chemicals are in use or stored and will be available for review by employees and their designated representatives.

B. Environmental Health & Safety will be responsible for reviewing and updating the workplace chemical list(s) for the TAMHSC as necessary, but at least by December 31st of each year.

C. The workplace chemical list(s) will be maintained for at least 30 years.

D. Further information on chemicals listed on the workplace chemical list(s) can be obtained by referring to the SDS, which is accessible on the EHS website or which may be located in the workplace where these chemicals are used or stored.

XIII. CHEMICAL INVENTORY PROGRAM (TAMHSC SAP 24.01.01.Z1.04)

A. A work area chemical inventory listing all hazardous chemicals purchased, used, and/or stored in each work area will be kept by each unit.

B. Each unit shall use the online chemical inventory database program administered by Environmental Health & Safety to maintain their chemical inventories.

C. Information included in the inventory will include, as appropriate:
   1) The name of the person responsible for the chemical.
   2) The chemical name or the common name of the product (product identifier), as found on the label and in the SDS.
   3) The CAS number of the chemical, if available.
   4) The physical state of the chemical (solid, liquid, or gas).
   5) The location (building and room number) where the chemical is stored/used.
   6) The quantity of the product per container.
   7) The total number of containers.
8) The date each item was received.

D. Instructions for completing a work area chemical inventory may be found in Appendix F of this Hazard Communication Program.
APPENDIX A – DEFINITIONS

APPROPRIATE HAZARD WARNING
Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the health and physical hazards, including the target organ effects, of the chemical(s) in the container(s).

ASPHYXIATION
A death or injury from suffocation that is caused by a chemical and which is due to interference with the oxygen supply of the blood, other than drowning.

CHEMICAL NAME
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
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.

CONTAINER
Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical or contains multiple smaller containers of an identical hazardous chemical. The term “container” does not mean pipes or piping systems, nor does it mean engines, fuel tanks, or other operating systems in a vehicle.

EMPLOYEE
A person who is on the payroll of the Texas A&M Health Science Center and who may be or may have been exposed to hazardous chemicals in the person’s workplace under normal operating conditions or foreseeable emergencies. Workers such as office workers or accountants who encounter hazardous chemicals only in non-routine, isolated instances are not employees for purposes of the Texas Hazard Communication Act.

EXPOSE OR EXPOSURE
Subjecting an employee 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 reasonable foreseeable emergency.
GLOBALLY HARMONIZED SYSTEM (GHS)
The GHS is an international system for standardizing and harmonizing the classification
and labeling of chemicals. The Federal Hazard Communication Standard was aligned
with the GHS in 2012.

HAZARD GROUP or CATEGORY
A grouping of hazardous chemicals with similar properties.

HAZARD STATEMENT
A statement assigned to a hazard class and category that describes the nature of the
hazard(s) of a chemical and including, where appropriate, the degree of hazard.

HAZARDOUS CHEMICAL or CHEMICAL
Any element, compound or mixture of elements or compounds that is a physical or
health hazard.

HEALTH HAZARD
A chemical for which acute or chronic health effects may occur in exposed employees
and which is a toxic agent, irritant, corrosive, or sensitizer.

LABEL
Any written, printed, or graphic material displayed on or affixed to containers of
hazardous chemicals, and which includes the same name as on the SDS.

MATERIAL SAFETY DATA SHEET (MSDS)
The term previously used to describe a document containing information on the hazards
of and safe handling information for a chemical. “Material Safety Data Sheet” had been
replaced by “Safety Data Sheet” in the Federal Hazard Communication Standard as the
proper name for this document.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Protective clothing or devices provided to an employee by the employer which provide a
level of protection from chemicals to which the employee may be exposed and that will
be adequate to ensure their health and safety based on current industry standards. PPE
may include gloves, lab coats, eye protection, and respirators.

PICTOGRAM
Standardized graphics and/or symbols used to convey specific information about the
hazards of a chemical.

PHYSICAL HAZARD
A chemical which is a combustible liquid, a compressed gas, explosive, flammable, an
organic peroxide, an oxidizer, pyrophoric, unstable (reactive), or water-reactive.
PRECAUTIONARY STATEMENT
A phrase that describes recommended measures to take to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or from improper storage or handling of a hazardous chemical.

PRIMARY CONTAINER
The container in which the chemical is received from the manufacturer, importer, or distributor.

PRODUCT IDENTIFIER
The name or number used for a hazardous chemical on a label or in the SDS and which provides a unique means by which the user can identify the chemical.

READILY AVAILABLE
Accessible during an individual’s work shift.

SAFETY DATA SHEET (SDS)
A document designed to communicate chemical hazard and safe handling information that is prepared in accordance with the requirements of the Globally Harmonized System (GHS) as adopted by the Occupational Safety & Health Administration’s Hazard Communication Standard. A CURRENT SDS is one which contains the most recent significant hazard information for the hazardous chemical as determined by the chemical’s manufacturer. An APPROPRIATE SDS is one which conforms to the most current requirements set by OSHA standards. The term “Safety Data Sheet” replaces the term “Material Safety Data Sheet.”

SECONDARY CONTAINER
A container to which the hazardous chemical is transferred after receipt from the supplier.

SIGNAL WORD
A word found on chemical container labels and in SDSs to indicate the relative level of severity of hazard, alerting the reader to a potential hazard. The two signal words used are “Danger” and “Warning,” with “Danger” used for more severe hazards and “Warning” used for less severe hazards.

SUPERVISOR
For the purpose of this Program, includes anyone who has oversight of one or more employees. This can include Principal Investigators, lab managers, etc.

UNIT
Includes Colleges, Departments, Offices, Centers and Institutes.
UNIT HEAD
Includes Deans, Department Heads, Directors, and Center and Institute Heads.

WORK AREA
A location within a workplace that consists of one or more rooms of common use that are interconnected (e.g., a laboratory suite or a shop), where hazardous chemicals are present, produced, or used, and where employees are present.

WORK AREA CHEMICAL INVENTORY
A list of all the hazardous chemicals present in a work area.

WORKPLACE
For the purposes of this Program, the TAMHSC defines a Workplace as a TAMHSC owned building as well as the grounds immediately adjacent to that building. A Workplace may also be defined as the portion of a building that is leased by the TAMHSC and occupied by TAMHSC personnel.

WORKPLACE CHEMICAL LIST
A list of all hazardous chemicals present at the workplace that are in a quantity exceeding 55 gallons or 500 pounds.
APPENDIX B – NOTICE TO EMPLOYEES

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.

HAZARDOUS CHEMICALS

Hazardous chemicals are any products or materials that present any physical or health hazards when used, unless they are exempted under the law. Some examples of more commonly used hazardous chemicals are fuels, cleaning products, solvents, many types of oils, compressed gases, many types of paints, pesticides, herbicides, refrigerants, laboratory chemicals, cement, welding rods, etc.

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 (MSDSs), which detail physical and health hazards and other pertinent information on those chemicals.

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 be made readily available for employees and their representatives on request.

LABELS

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

EMPLOYEE RIGHTS

Employees have rights to:
- access copies of MSDSs
- information on their chemical exposures
- receive training on chemical hazards
- receive appropriate protective equipment
- file complaints, assist inspectors, or testify against their employer

Employees may not be discharged or discriminated against in any manner for the exercise of any rights provided by this Act. A waiver of employee rights is void; an employer’s request for such a waiver is a violation of the Act. Employees may file complaints with the Texas Department of State Health Services at the toll-free number provided below.

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 State Health Services
Division of Regulatory Services
Enforcement Unit
1100 West 49th Street
Austin, Texas 78756
(512) 834-6665
Fax: (512) 834-6606

Texas Department of State Health Services
Approved 5/05
AVISO A LOS TRABAJADORES

La Ley sobre Comunicaciones de Peligro en Texas (revisión de 1993), codificada bajo el Capítulo 502 del Código de Salud y Seguridad de Texas, exige que los patrones o empleadores del sector público ofrezcan a los trabajadores con información específica sobre los peligros de aquellos productos químicos a los que trabajadores pueden estar expuestos en su lugar de trabajo. De acuerdo con la ley, el patrón debe ofrecer la información y entrenamiento correspondiente. A continuación tenemos un breve resumen de la ley.

PRODUCTOS QUÍMICOS PELIGROSOS

Los productos químicos peligrosos pueden ser cualquiera de los productos o materiales que presentan algún peligro físico o de salud cuando se está usando, a menos que sean uno de los exentos por la ley. Algunos ejemplos de los productos químicos peligrosos usados más comúnmente son los combustibles como la gasolina, productos de limpieza y muchos tipos de pinturas, pesticidas, herbicidas, congelantes, productos químicos de laboratorio, cemento, vainillas de soldadura, etc.

HOJAS DE DATOS SOBRE LA SEGURIDAD DEL MATERIAL

Los trabajadores que pueden estar expuestos a productos químicos peligrosos deberán ser informados por el patrón sobre esa exposición y deberán tener libre acceso a las hojas de datos más recientes sobre la seguridad de los materiales vigentes (MSDSs), en donde se explican los peligros físicos y de salud y dan información adicional sobre estos productos químicos.

LISTA DE PRODUCTOS QUÍMICOS EN LOS CENTROS DE TRABAJO

Los patrones deben desarrollar en el lugar de trabajo una lista de productos químicos peligrosos usados o almacenados de tamaño mayor de 55 galones o de 500 libras de peso. Esta lista deberá ser renovada por el patrón, cuando sea necesario, pero cuando menos una vez al año, y debe ponerse al alcance de los trabajadores y sus representantes cuando lo soliciten.

ETIQUETAS

Los trabajadores no deben trabajar con productos químicos peligrosos con recipientes sin etiquetas, a excepción de los recipientes portátiles para su uso inmediato, cuyos contenidos son conocidos por el usuario.

DERECHOS DE LOS TRABAJADORES

Los trabajadores tienen los siguientes derechos:
- tener acceso a las copias de MSDSs,
- recibir información sobre su exposición a productos químicos peligrosos,
- recibir entrenamiento sobre los productos químicos peligrosos,
- recibir equipo de protección apropiado,
- levantar quejas, ayudar a los inspectores, o atestiguar contra su patrón.

No se pueden despedir o discriminar contra los trabajadores en ninguna forma por hacer ejercicio de cualquiera de estos derechos proporcionados por esta Ley. La renuncia de un trabajador a sus derechos es nula; el patrón que solicita tal renuncia comete una violación de esta Ley. Los trabajadores pueden llamar al número de información que aparece más adelante, para levantar quejas ante el Departamento Estatal de Servicios de Salud.

PROGRAMA DE EDUCACIÓN PARA EL TRABAJADOR

Los patrones deberán proveer entrenamiento a los trabajadores nuevos asignados antes de que los trabajadores trabajen en una área que contenga un producto o material peligroso. Los trabajadores cubiertos deberán recibir entrenamiento por parte del patrón sobre el peligro de los productos químicos y sobre las medidas que pueden tomar para protegerse a sí mismos de esos peligros. Este entrenamiento deberá ser repetido tantas veces como sean necesario, pero por lo menos cuando un nuevo producto peligroso es introducido en el lugar de trabajo o se reciba nueva información sobre los productos químicos que ya están presentes.

LOS PATRONES PUEDEN RECIBIR PENALIZACIONES ADMINISTRATIVAS Y MULTAS CRIMINALES O CIVILES QUE VARÍAN DE $50 HASTA $100,000 POR CADA VIOLACIÓN A ESTA LEY.

Para poder recibir más información por favor llame al:

Texas Department of State Health Services
Division for Regulatory Services
Enforcement Unit
1100 West 49th Street
Austin, Texas 78756

(512) 834-6665
Fax: (512) 834-6606
APPENDIX C – TRAINING DOCUMENTATION

1. Online Hazard Communication Training Record

General Hazard Communication Training is available online through TrainTraq. Employees must complete the course titled “Hazard Communication & the Global Harmonizing System” to receive credit for General Hazard Communication Training. A copy of the employee’s TrainTraq transcript listing the course, along with a copy of the course description, shall meet the documentation requirements of this Program. The course description may be found on the EHS website.

2. Employee Hazard Communication Training Roster

The attached Employee Hazard Communication Training Roster will be used to document work area specific training. The roster may be used to document attendance to classroom-based or one-on-one training.
TEXAS A&M HEALTH SCIENCE CENTER

EMPLOYEE HAZARD COMMUNICATION TRAINING ROSTER
Texas Hazard Communication Act, Section 502.009(g)

Training Topic: __________________________ Date: _____________________

Instructor: __________________________ Location of Training: __________________________

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>UIN</th>
<th>PI/Supervisor</th>
<th>Department</th>
<th>Signature*</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

Page ___ of ___  *The Employee’s signature indicates he/she has received the training and understands the topics covered.
EMPLOYEE HAZARD COMMUNICATION TRAINING ROSTER (Continued)

A. Per Sections 502.009(c) and (g) of the Texas Hazard Communication Act (THCA), the following subject(s) were covered in this training:

☐ Reading and interpreting chemical container labels *(Check all applicable)*: ☐ GHS ☐ HMIS ☐ NFPA

☐ Reading and interpreting alternative labeling systems *(Describe)*: ________________________________

☐ Reading and interpreting Safety Data Sheets (SDSs)

☐ Location of hazardous chemicals in the workplace

☐ Physical and health effects of exposure

☐ Proper use of personal protective equipment

☐ First aid treatment for exposure

☐ Safety instruction on handling, clean-up, and disposal procedures

B. Per Section 502.009(g) of the THCA, training was conducted based on one of the following:

☐ Categories of hazardous chemicals *(Check all applicable)*:

  ☐ Flammables ☐ Corrosives ☐ Toxins/Irritants ☐ Reactive/Unstable Chemicals

☐ Individual hazardous chemicals *(List; attach additional sheet if necessary)*: ________________________________

____________________________________________________________________________________________________

C. Per Section 502.009(a), (e), and (f) of the THCA, and per Section VIII.F. of this Program, this training was provided as:

☐ New employee training ☐ New chemical hazard ☐ Increased potential for exposure

☐ Periodic/refresher training ☐ New hazard information on existing chemical
1. **Globally Harmonized System (GHS)**

The *Globally Harmonized System of Classification and Labeling of Chemicals*, or GHS, was developed to provide a common way to classify chemical hazards and communicate chemical hazard information worldwide. The goal of GHS is to improve safety through “consistent and simplified communications on chemical hazards and practices to follow for safe handling and use.” Pictograms are used to identify distinct hazards. Below are the GHS pictograms along with the hazard(s) each represent. The pictograms should be used in conjunction with the SDS to determine the particular hazard associated with the chemical.

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Flame</th>
<th>Exclamation Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="health_hazard.png" alt="Health Hazard Pictogram" /></td>
<td><img src="flame.png" alt="Flame Pictogram" /></td>
<td><img src="exclamation_mark.png" alt="Exclamation Mark Pictogram" /></td>
</tr>
<tr>
<td>• Carcinogen</td>
<td>• Flammables</td>
<td>• Irritant (skin and eye)</td>
</tr>
<tr>
<td>• Mutagenicity</td>
<td>• Pyrophorics</td>
<td>• Skin Sensitizer</td>
</tr>
<tr>
<td>• Reproductive Toxicity</td>
<td>• Self-Heating</td>
<td>• Acute Toxicity</td>
</tr>
<tr>
<td>• Respiratory Sensitizer</td>
<td>• Emits Flammable Gas</td>
<td>• Narcotic Effects</td>
</tr>
<tr>
<td>• Target Organ Toxicity</td>
<td>• Self-Reactives</td>
<td>• Respiratory Tract Irritant</td>
</tr>
<tr>
<td>• Aspiration Toxicity</td>
<td>• Organic Peroxides</td>
<td>• Hazardous to Ozone Layer (Non-Mandatory)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gas Cylinder</th>
<th>Corrosion</th>
<th>Exploding Bomb</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="gas_cylinder.png" alt="Gas Cylinder Pictogram" /></td>
<td><img src="corrosion.png" alt="Corrosion Pictogram" /></td>
<td><img src="exploding_bomb.png" alt="Exploding Bomb Pictogram" /></td>
</tr>
<tr>
<td>• Gases Under Pressure</td>
<td>• Skin Corrosion/Burns</td>
<td>• Explosives</td>
</tr>
<tr>
<td></td>
<td>• Eye Damage</td>
<td>• Self-Reactives</td>
</tr>
<tr>
<td></td>
<td>• Corrosive to Metals</td>
<td>• Organic Peroxides</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flame Over Circle</th>
<th>Environment (Non-Mandatory)</th>
<th>Skull and Crossbones</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="flame_over_circle.png" alt="Flame Over Circle Pictogram" /></td>
<td><img src="environment.png" alt="Environment Pictogram" /></td>
<td><img src="skull_and_crossbones.png" alt="Skull and Crossbones Pictogram" /></td>
</tr>
<tr>
<td>• Oxidizers</td>
<td>• Aquatic Toxicity</td>
<td>• Acute Toxicity (fatal or toxic)</td>
</tr>
</tbody>
</table>

Page | 23
2. **NFPA 704 (also known as the NFPA Diamond)**

The National Fire Protection Association (NFPA) through NFPA Standard 704 established a system to aid emergency responders in quickly identifying chemical hazards in fire situations. The square-on-point or “diamond” shaped symbol is easily recognizable and has been incorporated by many chemical manufacturers on their container labels.

Each colored section of the diamond represents a different hazard type. The number assigned, from 0 - 4, identifies the level of hazard. Zero (0) indicates minimal or “no” hazard while four (4) indicates severe hazard. The white section is reserved for special hazards.

**Red: Flammability**
- **0** – Will not burn
- **1** – Must be heated in order to ignite; flash point exceeds 200°F (93°C)
- **2** – Moderate heat for ignition; flash point between 100°F (38°C) and 200°F (93°C)
- **3** – Liquids or solids that ignite at most ambient temperature conditions; flash point between 73°F (23°C) and 100°F (38°C)
- **4** – Extremely flammable; readily vaporizes at normal temperature and pressure; flash point below 73°F (23°C)

**Blue: Health Hazard**
- **0** – Does not pose a health hazard greater than normal material
- **1** – May cause irritation and minor residual injury
- **2** – Intense or extended exposure may cause incapacitation
- **3** – Short exposure may cause serious temporary injury or residual injury
- **4** – Very brief exposure may cause death or major residual injury

**Yellow: Instability**
- **0** – Normally stable; not reactive with water
- **1** – May become unstable at elevated temperature and pressure; may be mildly reactive to water
- **2** – Unstable; may undergo violent decomposition but will not detonate; may react violently with water or form explosive mixtures with water
- **3** – May detonate or react explosively; requires strong initiating source; may react explosively with water
- **4** – Readily detonates or undergoes explosive decomposition at normal temperature and pressure

**White: Special Hazard**
- **W** – Reacts with water
- **OX** – Oxidizer
3. **Hazardous Material Information System (HMIS®)**

The Hazardous Material Information System (HMIS®) is a labeling method designed to assist employers in complying with OSHA’s Hazard Communication Standard. It was developed by the National Paint & Coatings Association (NPCA) as a means to provide safety information to all employees who handle hazardous chemicals. HMIS® utilizes colored bars to identify different hazard groups and a scale of zero (0) to four (4) to rate the severity of the hazard. While similar to the NPFA Diamond, the HMIS® method does differ in some ways. For instance, under HMIS® the assigned hazard value is for chemicals in normal conditions. Thus, HMIS® is not intended for emergency response. Another difference is that the bottom white bar is used to identify appropriate Personal Protective Equipment (PPE) rather than to identify special hazards.

Above are examples of the HMIS® label. The one on the left is an older version. The yellow “Reactivity” bar has been replaced with an orange “Physical Hazard” bar in the newer version.

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHRONIC HAZARD</strong></td>
<td><strong>FLAMMABILITY</strong></td>
</tr>
<tr>
<td><strong>HEALTH</strong></td>
<td>0 Minimal Hazard</td>
</tr>
<tr>
<td>* = Chronic Hazard</td>
<td>1 = Slight Hazard</td>
</tr>
<tr>
<td>Chronic (long-term) health effects may result from repeated overexposure.</td>
<td>Irritation or minor reversible injury possible.</td>
</tr>
<tr>
<td>0 = Minimal Hazard</td>
<td>2 = Moderate Hazard</td>
</tr>
<tr>
<td>No significant risk to health.</td>
<td>Temporary or minor injury may occur.</td>
</tr>
<tr>
<td>1 = Slight Hazard</td>
<td>3 = Serious Hazard</td>
</tr>
<tr>
<td>Irritation or minor reversible injury possible.</td>
<td>Major injury likely unless prompt action is taken and medical treatment is given.</td>
</tr>
<tr>
<td>2 = Moderate Hazard</td>
<td>4 = Severe Hazard</td>
</tr>
<tr>
<td>Temporary or minor injury may occur.</td>
<td>Life-threatening, major, or permanent damage may result from single or repeated overexposure.</td>
</tr>
<tr>
<td>3 = Serious Hazard</td>
<td>0 Minimal Hazard</td>
</tr>
<tr>
<td>Major injury likely unless prompt action is taken and medical treatment is given.</td>
<td>Materials that will not burn.</td>
</tr>
<tr>
<td>4 = Severe Hazard</td>
<td>1 = Slight Hazard</td>
</tr>
<tr>
<td>Life-threatening, major, or permanent damage may result from single or repeated overexposure.</td>
<td>Materials that must be preheated before ignition will occur. Includes liquids, solids, and semi-solids having a flash point above 200°F. (Class III B)</td>
</tr>
<tr>
<td>1 = Slight Hazard</td>
<td>2 = Moderate Hazard</td>
</tr>
</tbody>
</table>
| Materials that must be preheated before ignition will occur. Includes liquids, solids, and semi-solids having a flash point above 200°F. (Class III B) | Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes
<table>
<thead>
<tr>
<th>Hazard Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 = Serious Hazard</td>
<td>Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73°F and boiling points above 100°F, as well as liquids with flash points between 73°F and 100°F. (Classes IB &amp; IC)</td>
</tr>
<tr>
<td>4 = Severe Hazard</td>
<td>Flammable gases or very volatile flammable liquids with flash points below 73°F and boiling points below 100°F. Materials may ignite spontaneously with air. (Class IA)</td>
</tr>
</tbody>
</table>

### PHYSICAL HAZARD

<table>
<thead>
<tr>
<th>Hazard Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = Minimal Hazard</td>
<td>Materials that are normally stable under fire conditions and will not react to water, polymerize, decompose, condense, or self-react.</td>
</tr>
<tr>
<td>1 = Slight Hazard</td>
<td>Materials that are normally stable but can become unstable at high temperature and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.</td>
</tr>
<tr>
<td>2 = Moderate Hazard</td>
<td>Materials that are unstable and may undergo violent chemical change at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.</td>
</tr>
<tr>
<td>3 = Serious Hazard</td>
<td>Materials that may form explosive mixtures with water and/or are capable of detonation or explosive reaction in the presence of a strong initiating source. Materials may polymerize, decompose, self-react, or undergo other chemical changes at normal temperature and pressure with moderate risk of explosion.</td>
</tr>
<tr>
<td>4 = Severe Hazard</td>
<td>Materials that are readily capable of explosive water reaction, detonation, or explosive decomposition, polymerization, or self-reaction at normal temperature and pressure.</td>
</tr>
<tr>
<td>HAZARD INDEX</td>
<td>PERSONAL PROTECTION INDEX</td>
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<td>--------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>4 = SEVERE HAZARD</td>
<td>A +</td>
</tr>
<tr>
<td>3 = SERIOUS HAZARD</td>
<td>B +</td>
</tr>
<tr>
<td>2 = MODERATE HAZARD</td>
<td>C +</td>
</tr>
<tr>
<td>1 = SLIGHT HAZARD</td>
<td>D +</td>
</tr>
<tr>
<td>0 = MINIMAL HAZARD</td>
<td>E +</td>
</tr>
</tbody>
</table>

**PERSONAL PROTECTION EQUIPMENT**

- **A** Safety Glasses
- **B** Dust Mask
- **C** Synthetic Gloves
- **D** Lab Coats
- **E** Chemical Protective Coveralls
- **F** Lab Coats
- **G** Chemical Protective Coveralls
- **H** Lab Coats
- **I** Chemical Protective Coveralls
- **J** Lab Coats
- **K** Chemical Protective Coveralls
- **L** Consult your supervisor or S.O.P. for "SPECIAL Handling directions"
### APPENDIX E – WORKPLACE CHEMICAL LIST

Location (Campus & Building): _________________________________________________________

<table>
<thead>
<tr>
<th>Identity of Chemical (as appears on the SDS &amp; Container Label)</th>
<th>Work Area(s)</th>
<th>Total Quantity</th>
<th>Unit Size</th>
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</table>

Date of Preparation: __________________________

This Workplace Chemical List was prepared by: ____________________________________________

Name (Printed)  Signature
APPENDIX F – CHEMICAL INVENTORY PROGRAM WORKSHEET INSTRUCTIONS

The Chemical Inventory Worksheet can be used to gather chemical inventory information for uploading into ChemTracker. Inventories must be updated in ChemTracker by December 1st of each year or upon request. To download a copy of the Chemical Inventory Worksheet or for more information on the ChemTracker inventory program, visit the EHS website.

General Instructions: List hazardous chemicals (e.g. fuels, cleaning chemicals, etc.) that have a physical or health hazard identified on a Safety Data Sheet (SDS). Do not include chemical wastes such as used motor oil. List the chemicals or products by the same name that is on its label and on the SDS.

Specific Instructions:

1) Enter the Chemical Owner’s (PI’s) Name and Department in the appropriate blanks.
2) Enter the Campus and the Building in which the chemicals are located in the appropriate blanks.
3) Complete the inventory information in the appropriate column. All information is required unless otherwise noted.

(A) Room # – Enter the room number where the chemical is stored and/or used. If the chemical is located in a room within a suite, give the sub room number (ex: 200A)

(B) Manufacturer Name – Identify the company who manufactured the product, usually found on the container label. (Optional)

(C) Product or Catalog Number – Provide the catalog or product number, if available. (Optional)

(D) Chemical or Product Name – Enter the chemical name or the product name, as it appears on the SDS. If the product you are reporting has a trade secret formula, the generic name (provided on the SDS) may be used, such as "petroleum distillates". If the SDS does not provide a generic chemical name, the words "Trade Secret" may be used.

(E) CAS Number– Place the Chemical Abstract Service (CAS) Number of the substance in this column. The CAS number is usually available on the SDS for the product. If the product itself does not have a CAS Number, you may indicate the CAS Number of the primary hazardous ingredient. (Preferred; this information is optional, but if a CAS Number is available, providing it is very helpful.)

(F) Physical State – Enter the physical state of the chemical (S = Solid, L = Liquid, G = Gas)

(G) Amount per Container – Enter the amount of the chemical in a single container when received from the manufacturer or supplier. For example, if you purchased a case of 4 Liter bottles of Methanol, you would enter “4” in this column, regardless of the number of containers you received. If a container is only partially full at the time you take the inventory, enter the amount as if it were full.
(H) **Unit of Measure** – Examples: Liter, ML, gal, quart, fluid ounce (for liquids), ounce (for solids), pound, gram, KG, cubic feet (for gas), etc.

(I) **Number (#) of Containers** – Enter the number of containers you have for the chemical that are of the same size. For instance, in the example described in (G) above, the case of Methanol has 6 bottles. In this case, you would enter “6”. If you have 3 bottles that are 4 Liters in size, and 3 that are 500 ML in size, you would enter the two sizes on separate lines.

(J) **Bay or Bench** – Enter the bay or bench identifier where the chemical is stored, if available. *(Optional)*

(K) **Location (within lab)** – Enter the location within the lab where the chemical is stored (ex: flammable cabinet or refrigerator). *(Optional)*

(L) **Shelf** – Enter the shelf identifier within the cabinet or refrigerator/freezer where the chemical is stored.

(M) **Received Date** – Enter the date the chemical was received in this column.

(N) **Expiration Date** – Enter the expiration date provided by the manufacturer. If one is not provided and the chemical is time-sensitive (ex: peroxide formers), then the expiration should be one year from the Received Date.

![Image of the Chemical Inventory Program Worksheet](image-url)