

The University Of  
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# Hazard Communication Program

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*Effective 2017*

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Revision 1.0

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## RECORD OF AMENDMENTS

Date	Section	Amendment	Initial

When using a paper copy of this document, verify that it is the same revision level as the on-line version.

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## 1 PURPOSE AND SCOPE

The intent of this program is to comply with the Occupational Safety and Health Administration's [OSHA's] Hazard Communication Standard as published in the Code of Federal Regulations [29 CFR 1910.1200]. Hazard Communication training is intended to educate employees to prevent unnecessary illness or injury due to chemical exposures. Employees will be able to utilize the information presented to ensure safe handling, use and storage of hazardous substances in their work environment. This policy, in conjunction with a training program, will serve to communicate the workplace-specific health and/or physical hazard information available at the University.

### 1.1 ACRONYMS / DEFINITIONS

**CHEMICAL** - Any element, chemical compound or mixture of substances and/or compounds.

**DOL** - Department of Labor (Federal)

**EXPOSURE** – Physical introduction of a chemical through the body's various routes of entry including inhalation, ingestion, skin contact or absorption.

**GHS** – Globally Harmonized System of Classification and Labeling of Chemicals [GHS]

**MSDS** - Material Safety Data Sheet – *Former Name*

**NFPA** - National Fire Protection Association; a national organization that recommends minimum fire protection standards.

**OSHA** - Occupational Safety and Health Administration; Federal Agency responsible for the enforcement of safety and health regulations for all employees within the United States.

**SDS** – Safety Data Sheets

**TOXIC SUBSTANCE** - A chemical substance or mixture 1% or more (.1% for carcinogens) in gaseous, liquid, or solid state, which causes a safety or health risk during use.

## 2 PROGRAM MANAGEMENT RESPONSIBILITIES

This Hazard Communication Program establishes the University requirements for information sharing and training. The University strives to provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, upon changes in assignments, and whenever a new chemical hazard is introduced to the work environment. Specific responsibility assignments are as described in the following sections:

### 2.1 CHEMICAL HYGIENE & BIOLOGICAL SAFETY OFFICER [CHBO]

The CHBO is responsible for updating the University's Hazard Communication Program to maintain compliance with OSHA's Hazard Communication regulatory requirements. The CHBO will assist with employee comprehension training for the Safety Data Sheets [SDSs] formerly known as, Material Safety Data Sheets [MSDSs] and the GHS standardized chemical container label. The following tasks identify common EH&S efforts associated with Hazard Communication compliance:

- Posts notice provided by the DOL informing employees of their rights;
- Maintains a chemical inventory that lists all the chemicals utilized onsite that contain any toxic or potentially hazardous substances;
- Obtains a current SDS for each substance listed in the chemical inventory and maintains these SDSs for the required minimum 30-year period;
- Maintains a computerized database of SDSs;
- Maintains hard copies of relevant SDSs to ensure employee accessibility and availability to emergency response personnel;
- Reviews SDSs for new product requests; and
- Notifies OSHA and DOL of problems with receiving an SDS from the manufacturer by letter or telephone should the SDS not be received from the manufacturer within 30 days of the first request.

## **2.2 PRINCIPAL INVESTIGATORS**

### **2.2.1 TRAINING REQUIREMENTS FOR WORKSPACES**

Principal Investigators [PIs] must provide annual training to all employees who work in areas where chemical substances or physical hazards are present. The training must present the potential physical and/or health hazards associated with each substance in the work area. Other training requirements include how to use and store each substance safely, personal protective equipment [PPE], the current NFPA labeling system, the GHS labeling system, how to read and understand SDSs, emergency and first aid procedures and other applicable workplace safety information.

PIs must ensure that employees new to the University receive formal Hazard Communication training within 30 days from the onset of work. Prior to the formal training, the employee must be briefed on the hazards of any toxic substance that they may immediately be exposed to or that may be present in the work area.

PIs must also ensure that any employee transferring to another area or assigned to perform a job outside of their normal duties is trained on any potential hazards in their

new assignment. Supplemental Hazard Communication training would routinely involve a review of any unfamiliar SDSs, introduction of new equipment, and following additional personal protective equipment needs assessment.

Lastly, PIs are responsible for ensuring any contracted labor working in their area receives Hazard Communication training pursuant to this document. Training conducted by a previous employer is not a fulfillment of this training program requirement.

### **2.3 OTHER FULFILLMENT OBLIGATIONS**

PIs are responsible for ensuring that all assigned personal protective equipment is readily available for employee use. New personal protective equipment being considered for purchase must first be reviewed by the CHBO to ensure that the correct equipment will be purchased.

PIs are responsible for ensuring all chemical containers are properly labeled. Refer to Section 6 - "Labeling Requirements" for more detailed information.

PIs are responsible for ensuring the annual completion of a chemical inventory for all chemicals used or stored in their area. A copy of the completed inventory form should be submitted to the CHBO on an annual basis.

Managers are responsible for ensuring their employees have 24-hour access to current SDSs. Copies of SDSs can be obtained by one of the following methods:

1. The simplest option is to locate the nearest hard copies of SDSs books kept within the space.
2. Conduct a Search on the University Website <http://utweb.ut.edu/ehs>
3. Conduct an Internet search on the manufacturer's website to retrieve SDS.

## **3 EMPLOYEE RIGHTS**

The federal OSHA Hazard Communication Standard provides employees with the following rights:

1. The right to know of the listed toxic substances present in the workplace;
2. The right to obtain a copy of the Safety Data Sheet for each listed toxic substance present;

3. The right to training, prior to exposure to a chemical on the potential adverse effects of each listed toxic substance in the work place, how to use each substance safely, and what to do in case of emergency;
4. The right to obtain further information on the properties and hazards of listed toxic substances;
5. The right to contact the Secretary of the Department of Labor to obtain further information on the OSHA Hazard Communication Standard; and
6. The right to review the written Hazard Communication Program upon request.

#### **4 SAFETY DATA SHEETS [SDS]**

Formerly known as Material Safety Data Sheet, an SDS is a document containing standardized information about the hazardous properties of a chemical substance. The OSHA 2012 revised Hazard Communication Standard provided for adoption of the UN GHS system that will make SDSs uniform across the globe. Under the law, manufacturers, importers, and distributors of chemical substances are required to prepare and provide SDSs to their direct purchasers. If the manufacturer fails to produce the SDS within 30 days of the initial request, the CHBO shall contact OSHA for assistance.

The Company receives its SDSs directly from our suppliers or the manufacturer and assumes all information contained in the SDS is accurate. The purpose of an SDS is to provide brief guidance on the handling of hazardous chemicals so it is important for employees to become familiar with the format and understand the contents of the SDSs.

The SDSs we receive will remain on file for the required 30-year period. The Company's master SDSs are located in the CHBO office.

##### **4.1 SAFETY DATA SHEET FORMAT**

The information contained in the SDS is largely the same as the MSDS, except now the SDSs are required to be presented in a consistent user-friendly, 16-section format.

The SDS includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. The information contained in the SDS must be in English (although it may be available in other languages as well). In addition, OSHA requires that SDS preparers provide specific minimum information as detailed in Appendix D of 29 CFR 1910.1200. The SDS preparers may also include additional information in various section(s).

SDS Sections 1 through 8 contains general information about the chemical, identification, hazards, composition, safe handling practices, and emergency control measures (e.g., fire fighting). This information should be helpful to those that need to get the information quickly. Sections 9 through 11 and 16 contain other technical and scientific information, such as physical and chemical properties, stability and reactivity information, toxicological information, exposure control information, and other information including the date of preparation or last revision. The SDS must also state that no applicable information was found when the preparer does not find relevant information for any required element.

The SDS must also contain Sections 12 through 15, to be consistent with the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS), but OSHA will not enforce the content of these sections because they concern matters handled by other agencies.

A description of all 16 sections of the SDS, along with their contents, is presented below:

<p><b>Section 1: Identification</b></p>
<p>This section identifies the chemical on the SDS as well as the recommended uses. It also provides the essential contact information of the supplier. The required information consists of:</p> <ul style="list-style-type: none"> <li>• Product identifier used on the label and any other common names or synonyms by which the substance is known.</li> <li>• Name, address, phone number of the manufacturer, importer, or other responsible party, and emergency phone number.</li> <li>• Recommended use of the chemical (e.g., a brief description of what it actually does, such as flame retardant) and any restrictions on use (including recommendations given by the supplier). <sup>1</sup></li> </ul>
<p><b>Section 2: Hazard(s) Identification</b></p>
<p>This section identifies the hazards of the chemical presented on the SDS and the appropriate warning information associated with those hazards. The required information consists of:</p> <ul style="list-style-type: none"> <li>• The hazard classification of the chemical (e.g., flammable liquid, category1).</li> <li>• Signal word.</li> </ul>

- Hazard statement(s).
- Pictograms (the pictograms or hazard symbols may be presented as graphical reproductions of the symbols in black and white or be a description of the name of the symbol (e.g., skull and crossbones, flame).
- Precautionary statement(s).
- Description of any hazards not otherwise classified.
- For a mixture that contains an ingredient(s) with unknown toxicity, a statement describing how much (percentage) of the mixture consists of ingredient(s) with unknown acute toxicity. Please note that this is a total percentage of the mixture and not tied to the individual ingredient(s).

### **Section 3: Composition/Information on Ingredients**

This section identifies the ingredient(s) contained in the product indicated on the SDS, including impurities and stabilizing additives. This section includes information on substances, mixtures, and all chemicals where a trade secret is claimed. The required information consists of:

#### Substances

- Chemical name.
- Common name and synonyms.
- Chemical Abstracts Service (CAS) number and other unique identifiers.
- Impurities and stabilizing additives, which are themselves classified and which contribute to the classification of the chemical.

#### Mixtures

- Same information required for substances.
- The chemical name and concentration (i.e., exact percentage) of all ingredients which are classified as health hazards and are:
  - Present above their cut-off/concentration limits or
  - Present a health risk below the cut-off/concentration limits.
- The concentration (exact percentages) of each ingredient must be specified except concentration ranges may be used in the following situations:
  - A trade secret claim is made,



- There is batch-to-batch variation, or
- The SDS is used for a group of substantially similar mixtures.

Chemicals where a trade secret is claimed

- A statement that the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret is required.

#### **Section 4: First-Aid Measures**

This section describes the initial care that should be given by untrained responders to an individual who has been exposed to the chemical. The required information consists of:

- Necessary first-aid instructions by relevant routes of exposure (inhalation, skin and eye contact, and ingestion).
- Description of the most important symptoms or effects, and any symptoms that are acute or delayed.
- Recommendations for immediate medical care and special treatment needed, when necessary.

#### **Section 5: Fire-Fighting Measures**

This section provides recommendations for fighting a fire caused by the chemical. The required information consists of:

- Recommendations of suitable extinguishing equipment, and information about extinguishing equipment that is not appropriate for a particular situation.
- Recommendations on special protective equipment or precautions for firefighters.
- Advice on specific hazards that develop from the chemical during the fire, such as any hazardous combustion products created when the chemical burns.

#### **Section 6: Accidental Release Measures**

This section provides recommendations on the appropriate response to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment. It may also include recommendations distinguishing between responses for large and small spills where the spill volume has a significant impact on the hazard. The required information may consist of recommendations for:

- Use of personal precautions (such as removal of ignition sources or providing sufficient ventilation) and protective equipment to prevent the contamination of skin, eyes, and clothing.
- Emergency procedures, including instructions for evacuations, consulting experts when needed, and appropriate protective clothing.
- Methods and materials used for containment (e.g., covering the drains and capping procedures).
- Cleanup procedures (e.g., appropriate techniques for neutralization, decontamination, cleaning or vacuuming; adsorbent materials; and/or equipment required for containment/clean up).

### **Section 7: Handling and Storage**

This section provides guidance on the safe handling practices and conditions for safe storage of chemicals. The required information consists of:

- Precautions for safe handling, including recommendations for handling incompatible chemicals, minimizing the release of the chemical into the environment, and providing advice on general hygiene practices (e.g., eating, drinking, and smoking in work areas is prohibited).
- Recommendations on the conditions for safe storage, including any incompatibilities. Provide advice on specific storage requirements (e.g., ventilation requirements).

### **Section 8: Exposure Controls/Personal Protection**

This section indicates the exposure limits, engineering controls, and personal protective measures that can be used to minimize worker exposure. The required

information consists of:

- OSHA Permissible Exposure Limits (PELs), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.
- Appropriate engineering controls (e.g., use local exhaust ventilation, or use only in an enclosed system).
- Recommendations for personal protective measures to prevent illness or injury from exposure to chemicals, such as personal protective equipment (PPE) (e.g., appropriate types of eye, face, skin or respiratory protection needed based on hazards and potential exposure).
- Any special requirements for PPE, protective clothing or respirators (e.g., type of glove material, such as PVC or nitrile rubber gloves; and breakthrough time of the glove material).

### **Section 9: Physical and Chemical Properties**

This section identifies physical and chemical properties associated with the substance or mixture. The minimum required information consists of:

- Appearance (physical state, color, etc.);
- Upper/lower flammability or explosive limits;
- Odor;
- Vapor pressure;
- Odor threshold;
- Vapor density;
- pH;
- Relative density;
- Melting point/freezing point;
- Solubility(ies);
- Initial boiling point and boiling range;
- Flash point;
- Evaporation rate;
- Flammability (solid, gas);

- Upper/lower flammability or explosive limits;
- Vapor pressure;
- Vapor density;
- Relative density;
- Solubility(ies);
- Partition coefficient: n-octanol/water;
- Auto-ignition temperature;
- Decomposition temperature; and
- Viscosity.

The SDS may not contain every item on the above list because information may not be relevant or is not available. When this occurs, a notation to that effect must be made for that chemical property. Manufacturers may also add other relevant properties, such as the dust deflagration index (Kst) for combustible dust, used to evaluate a dust's explosive potential

### **Section 10: Stability and Reactivity**

This section describes the reactivity hazards of the chemical and the chemical stability information. This section is broken into three parts: reactivity, chemical stability, and other. The required information consists of:

#### **Reactivity**

- Description of the specific test data for the chemical(s). This data can be for a class or family of the chemical if such data adequately represent the anticipated hazard of the chemical(s), where available.

#### **Chemical stability**

- Indication of whether the chemical is stable or unstable under normal ambient temperature and conditions while in storage and being handled.
- Description of any stabilizers that may be needed to maintain chemical stability.
- Indication of any safety issues that may arise should the product change in physical appearance.

**Other**

- Indication of the possibility of hazardous reactions, including a statement whether the chemical will react or polymerize, which could release excess pressure or heat, or create other hazardous conditions. Also, a description of the conditions under which hazardous reactions may occur.
- List of all conditions that should be avoided (e.g., static discharge, shock, vibrations, or environmental conditions that may lead to hazardous conditions).
- List of all classes of incompatible materials (e.g., classes of chemicals or specific substances) with which the chemical could react to produce a hazardous situation.
- List of any known or anticipated hazardous decomposition products that could be produced because of use, storage, or heating. (Hazardous combustion products should also be included in Section 5 (Fire-Fighting Measures) of the SDS.)

**Section 11: Toxicological Information**

This section identifies toxicological and health effects information or indicates that such data are not available. The required information consists of:

- Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact). The SDS should indicate if the information is unknown.
- Description of the delayed, immediate, or chronic effects from short- and long-term exposure.
- The numerical measures of toxicity (e.g., acute toxicity estimates such as the LD50 (median lethal dose)) - the estimated amount [of a substance] expected to kill 50% of test animals in a single dose.
- Description of the symptoms. This description includes the symptoms associated with exposure to the chemical including symptoms from the lowest to the most severe exposure.
- Indication of whether the chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on

<p>Cancer (IARC) Monographs (latest editions) or found to be a potential carcinogen by OSHA</p>
<p><b>Section 12: Ecological Information (non-mandatory)</b></p>
<p>This section provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment. The information may include:</p> <ul style="list-style-type: none"> <li>• Data from toxicity tests performed on aquatic and/or terrestrial organisms, where available (e.g., acute or chronic aquatic toxicity data for fish, algae, crustaceans, and other plants; toxicity data on birds, bees, plants).</li> <li>• Whether there is a potential for the chemical to persist and degrade in the environment through either biodegradation or other processes, such as oxidation or hydrolysis.</li> <li>• Results of tests of bioaccumulation potential, making reference to the octanol-water partition coefficient (Kow) and the bioconcentration factor (BCF), where available.</li> <li>• The potential for a substance to move from the soil to the groundwater (indicate results from adsorption studies or leaching studies).</li> <li>• Other adverse effects (e.g., environmental fate, ozone layer depletion potential, photochemical ozone creation potential, endocrine disrupting potential, and/or global warming potential).</li> </ul>
<p><b>Section 13: Disposal Considerations (non-mandatory)</b></p>
<p>This section provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices. To minimize exposure, this section should also refer the reader to Section 8 (Exposure Controls/Personal Protection) of the SDS. The information may include:</p> <ul style="list-style-type: none"> <li>• Description of appropriate disposal containers to use.</li> <li>• Recommendations of appropriate disposal methods to employ.</li> <li>• Description of the physical and chemical properties that may affect disposal activities.</li> </ul>

- Language discouraging sewage disposal.
- Any special precautions for landfills or incineration activities

**Section 14: Transport Information (non-mandatory)**

This section provides guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea. The information may include:

- UN number (i.e., four-figure identification number of the substance).
- UN proper shipping name.
- Transport hazard class(es).
- Packing group number, if applicable, based on the degree of hazard.
- Environmental hazards (e.g., identify if it is a marine pollutant according to the International Maritime Dangerous Goods Code (IMDG Code)).
- Guidance on transport in bulk (according to Annex II of MARPOL 73/78 and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code (IBC Code))).
- Any special precautions which an employee should be aware of or needs to comply with, in connection with transport or conveyance either within or outside their premises (indicate when information is not available).

**Section 15: Regulatory Information (non-mandatory)**

This section identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS. The information may include:

- Any national and/or regional regulatory information of the chemical or mixtures (including any OSHA, Department of Transportation, Environmental Protection Agency, or Consumer Product Safety Commission regulations)





### Section 16: Other Information

This section indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.

## 5 LABELING REQUIREMENTS

OSHA states that the purpose of a container label is to provide an immediate identification and visual warning about the potential hazards of the chemicals within the container. Manufacturers, importers and distributors are required to label their containers prior to shipping the chemical. In accordance with the new GHS labeling system adopted by OSHA, manufacturers will be required to use the new labeling system on all chemical substances by June 1, 2015. At any time, employees can expect to see the new labels with the required to have pictograms, a signal word, hazard and precautionary statements, the product identifier, and supplier identification. Supplemental information can also be provided on the label as needed. A sample of the new GHS label, identifying the required label pictograms, is shown below.

**Isopropanol (2-Propanol)**

	<b>DANGER</b> Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness.	<b>RESPONSE</b> <b>If inhaled:</b> Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell. <b>If in eyes:</b> Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. <b>In case of fire:</b> Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.
	<b>PREVENTION</b> Keep away from heat, sparks, and open flames. — No smoking. Keep container tightly closed. Avoid breathing vapors. Use only outdoors or in a well-ventilated area. Wear eye protection.	

### 5.1 REQUIRED GHS LABEL ELEMENTS

Under GHS standards, a Product Identifier, Pictogram, Signal Word, Hazard Statement, and Supplier Information must be stated on each chemical product label.

#### 5.1.1 PRODUCT IDENTIFIER






A Product Identifier is the ingredient name or number of the pure chemical substance or chemical mixture. The Product Identifier is meant to prevent accidental or uninformed exposure. A worker, shipper, or supply chain partner must be able to accurately identify the chemical and recognize its potential hazard.

### 5.1.2 GHS PICTOGRAMS (DIAMOND-SHAPED SYMBOLS)

Each red, black, and white diamond-shaped pictogram conveys information about particular hazardous risks associated with a chemical. In combination with the Signal Word “Danger” or “Warning,” the pictogram communicates the severity of the risk, and is meant to prevent accidental or uninformed exposure. More than one pictogram may be used on the same chemical label, if applicable. The size of the pictogram, and other label elements, should be proportionate to the physical dimensions of the label.

#### Table of Pictograms:

Flame Over Circle	Flame	Exploding Bomb
 <ul style="list-style-type: none"> <li>▪ Oxidizers</li> </ul>	 <ul style="list-style-type: none"> <li>▪ Flammables</li> <li>▪ Pyrophorics</li> <li>▪ Self-Heating</li> <li>▪ Emits Flammable Gas</li> <li>▪ Self-Reactives</li> <li>▪ Organic Peroxides</li> </ul>	 <ul style="list-style-type: none"> <li>▪ Explosives</li> <li>▪ Self-Reactives</li> <li>▪ Organic Peroxides</li> </ul>
Skull and Crossbones	Corrosion	Gas Cylinder









The University Of

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# Hazard Communication Program

Effective August 2017

 <ul style="list-style-type: none"> <li>▪ Acute Toxicity (fatal or toxic)</li> </ul>	 <ul style="list-style-type: none"> <li>▪ Skin Corrosion/Burns</li> <li>▪ Eye Damage</li> <li>▪ Corrosive to Metals</li> </ul>	 <ul style="list-style-type: none"> <li>▪ Gases Under Pressure</li> </ul>
<p><b>Health Hazard</b></p>	<p><b>Environment</b></p>	<p><b>Explanation Mark</b></p>
 <ul style="list-style-type: none"> <li>▪ Carcinogen</li> <li>▪ Mutagenicity</li> <li>▪ Reproductive Toxicity</li> <li>▪ Respiratory Sensitizer</li> <li>▪ Target Organ Toxicity</li> <li>▪ Aspiration Toxicity</li> </ul>	 <ul style="list-style-type: none"> <li>▪ Aquatic Toxicity</li> </ul>	 <ul style="list-style-type: none"> <li>▪ Irritant (skin and eye)</li> <li>▪ Skin Sensitizer</li> <li>▪ Acute Toxicity</li> <li>▪ Narcotic Effects</li> <li>▪ Respiratory Tract Irritant</li> <li>▪ Hazardous to Ozone Layer (Non-Mandatory)</li> </ul>

### **5.1.3 SIGNAL WORDS ONE (1) AND TWO (2)**

These words are used to indicate the relative hazard severity and alert the reader to a potential hazard. The Signal Word “Warning” and the numeral “1” indicate a less-severe or non-lethal hazard. The Signal Word “Danger” and the number “2” indicate a severe or potentially lethal hazard.

### **5.1.4 HAZARD STATEMENTS**

These phrases describe the nature and degree of the hazard posed by the chemical. All hazard statements should be included on the label for a substance/mixture possessing more than one hazard. An example of a hazard statement would be “Heating may cause an explosion.”

### **5.1.5 PRECAUTIONARY STATEMENTS**

These statements must relate to the GHS pictogram, and further describe measures that should be taken to minimize or prevent risks associated with the hazard. The number of precautionary statements should be kept to a maximum of six [6]. An example of a precautionary statement would be: “Keep away from heat/sparks/open flames/hot surfaces – no smoking” in relation to a pictogram that shows Explosive Danger and a Hazard Statement such as “Heating may cause an explosion.”

### **5.1.6 SUPPLIER INFORMATION**

Each chemical container, including secondary packaging such as crates and master cases, must include a GHS label printed with the Supplier Information. This must include the name, address, and telephone number of the manufacturer or supplier of the product.

### **5.1.7 SUPPLEMENTARY INFORMATION**

The Supplementary Information is additional product information volunteered by the manufacturer, supplier, or other responsible party. It is acceptable for the manufacturer to make a statement that is not harmonized with GHS standards. However, the statement must not conflict with GHS standards.

## **6 REQUIRED NFPA LABEL ELEMENTS**

In Compliance with the Hazard Communication Standard, the Company has established a secondary container labeling system for all chemicals transferred out of the original container.

Managers are responsible for ensuring that all chemical products in their work area that are in secondary containers are prominently and correctly labeled using the Company approved NFPA label system.

The NFPA label should contain the following minimum information:

1. Product or Chemical name;
2. Assigned SDS number;
3. The numeric "Health", "Fire" and "Reactivity" hazard rating;
4. Specific Hazard (Incompatibility codes);

Ensure all label information is legible and written in indelible ink. Corrosive resistant labels may be necessary for chemicals that are actively handled and result in degradation of the indelible ink. For example, Isopropyl Alcohol secondary containers should be carefully monitored to ensure that the label remains legible at all times.

The University requires that the LABEL REMAINS LEGIBLE during use or storage of the product.

Contact the CHBO Department to procure blank NFPA labels or discuss alternative labeling strategies. An example of an NFPA label is shown below:



## **7 CHEMICAL INVENTORY**

The University is required to maintain a chemical inventory of all chemical substances used or stored onsite. The master chemical inventory is maintained by the CHBO. PIs should maintain a copy of their department's completed Chemical Inventory.

Any new chemical(s) being considered for possible purchase must first receive the CHBO's approval before the product can rightfully enter the property. The requester should obtain the product's SDS from the manufacturer for the CHBO to evaluate the product's toxicity and other properties for safe use and storage by employees.

If a proposed product is approved for purchase, the PI is responsible for immediately updating their area CHEMICAL INVENTORY FORM. Chemical Inventory Forms should be forwarded to the CHBO as updates are made or at least annually.

The CHBO is responsible for updating the master SDS database for all new chemical purchases.

## **8 MANAGER'S GUIDE TO CONDUCTING EMPLOYEE TRAINING**

In compliance with OSHA's Hazard Communication Standard employee training requirements, the University is required to provide annual employee training on the specific job hazards potentially in their work environment. PIs are responsible for either conducting the training themselves or ensuring that their employees are trained by some other means of competent training that includes all components of OSHA's Hazard Communications Standard. This could include the use of recognized training personnel, or other structured training methods such as DVD's or Power Point presentations. The CHBO will be available to assist with training events.

The following subsections serve as the training resource guides to assist PIs or designated trainers in presenting or preparing effective training materials.

### **8.1 PREPARATION AND PLANNING**

The PI should complete their department's annual chemical inventory confirm the current chemicals being used or stored in each area. At this time, the PI should ensure that a current SDS is on file for each product/chemical located in their area. At least annually, the manager should ensure that all SDSs on file are in the most current form as published by the manufacturer.

The Training should demonstrate the NFPA hazard label for proper chemical identification when located in secondary containers and how to complete the information needed on each label. Contact the CHBO for assistance with completing the NFPA secondary label hazard warning properties.

The PI should review the Personal Protective Equipment Selected specifically by Job or Task Classification in their area, and update as needed prior to training. The PI should confirm the availability of recommended personal protective equipment, if any, to safely protect employees from unnecessary exposure to the product. Contact the CHBO if in doubt of the particular type of eye, face, respiratory or skin protection required to safely protect your employee or if a personal protective needs assessment is required for a unique operating task. Individual departments assume budgetary responsibility for the purchase of all required safety equipment.

The PI should review, update and discuss implementing an evacuation plan with employees during an emergency event.

At a minimum, the materials below must accompany the training. If training is done personally by a PI or training personnel, these handouts can be incorporated into the training program. If the training is done via some other medium (i.e., DVD or Power Point presentation) then the manager must still provide and review these materials prior to or following the presentation.

- Copy of your Department's Completed Chemical Inventory Form
- Personal Protective Equipment Selected
- Employee Emergency Evacuation Plan

## **8.2 CONDUCTING THE TRAINING PROGRAM**

The chosen training method for conducting the OSHA Hazard Communication Training should include the following at minimum:

1. Review of the Federal OSHA law and supplemental information.
2. Statement explaining that the regulation's intent is to educate employees on the potential hazards in the work place. Safe handling and use of chemicals is extremely important for employees to limit exposure.
3. Review the University's Hazard Communication Program elements.
4. Chemical Inventories:

All chemicals known to be present in the facility have been inventoried by the CHBO. Their corresponding SDSs are stored on a computer database that is updated when new SDSs are received. Each PI should ensure that they maintain a current Digital or Hard copy of their particular Chemical Inventory listing at all times and that a copy of Chemical Inventory Form is forwarded to the CHBO.

5. Safety Data Sheets [formerly known as MSDSs]:



- Ensure that employees understand all sections of an SDS format.
  - Review the procedures for an employee to obtain a copy of an SDS:
  - The simplest option is to locate the nearest Right-to-Know MSDS station. Hard copies of SDSs are kept in books at these locations.
  - Conduct an Internet search on the manufacturer's website to retrieve SDS.
6. Labeling:

Chemicals in any work area must be stored in approved containers (original container or Facilities/EH&S Department approved secondary containers ONLY). The company currently utilizes the NFPA labeling system for secondary containers. All containers must be labeled according to the Hazard Communication Program guidelines. Labels provide immediate identification and visual warning about the potential hazards of the chemical in the container. The minimally required label information can be found on an example label available from the Facilities/EH&S Department and Section 7 of this procedure contains specific labeling requirements in more detail.

7. Employee Rights:

Explain that the law provides employees the rights listed in Section 5 of this procedure.

### **8.3 HAZARD COMMUNICATION TRAINING OUTLINE SUMMARY**

1. REVIEW COMPANY HAZARD COMMUNICATION POLICY ISO 792-0147
2. UNDERSTANDING CHEMICAL CONTAINER LABELS
  - NFPA Label Requirement on secondary Containers
  - GHS Label Requirement on New Chemical Containers
3. SAFETY DATA SHEET COMPREHENSION
  - Recognize Sixteen Section Format
  - Find Important Information Quickly
4. REVIEW CHEMICAL INVENTORY FORMS [ISO FORM 792-0147-2]
  - Chemical Inventory Forms are Updated Annually
  - Employees notified of new chemicals in the workplace
  - Instruct employees on the use of NFPA labels in use at this facility for secondary containers – All containers must be labeled with the chemical name.
  - Instruct Employees on how to obtain SDS sheets.
  - Instruct employees on housekeeping standards and reduce potential for lead ingestion.
  - Drink cups on floor limited to those with approved lids; Food Prohibited.
  - Explain Administrative and Engineering Controls in Workplace to minimize chemical exposures

**5. REVIEW PERSONAL PROTECTIVE EQUIPMENT SELECTION**

- Review anticipated job hazards
- Review assigned personal protective equipment
- Check each employee's supply of PPE; Verify in good condition or assign new PPE
- Train employees on the proper use and disposal of all PPE
- Ensure Employees and Supervisors reviewed this form together and obtain signatures of such in required spaces

**6. REVIEW EMERGENCY EXIT PROCEDURES**

- Identify Meeting Location(s) per ISO 799-0235
- Identify Critical Equipment Shutdown Procedures

**9 TRAINING RECORDS**

All employee (including temporary contract workers) training must be documented. Additional information and training materials are available from the CHBO.