
Volunteer State Community College

Hazard Communication Program

Occupational Safety & Health Standards for General Industry

29 CFR 1910.1200

**“Employee Right To Know” &
“Employee Right To Understand”**

The information contained in this plan documents the policies and procedures of Volunteer State Community College including the Livingston, Springfield, CHEC and all other off-campus locations.

This information, as well as additional Environmental, Health & Safety information, can also be found online at <http://www.volstate.edu/Safety/>

Hazard Communication Program

Introduction to Hazard Communication Program

Employees of Volunteer State Community College have the right to know and understand the properties and potential safety and health hazards of substances to which they may be exposed. Such knowledge is essential to reducing the risk of occupational illness and injury. In 1994 OSHA issued the Hazard Communication Standard, 29 CFR 1910.1200, with the purpose of ensuring that employees have the “Right To Know” the chemicals they are exposed to in their place of employment. In 2012, OSHA revised the Hazard Communication Standard to bring it into alignment with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), which will also give workers the “Right To Understand.”

This program applies to all work operations at our college where you may be exposed to hazardous chemicals under normal working conditions or during an emergency situation. Copies of the Hazard Communication Program are available in the Environmental, Health & Safety (EH&S) Office for review by any interested employee.

The Director of EH&S is the program coordinator, with overall responsibility for the program, including reviewing and updating this plan as necessary.

Goals of Hazard Communication

- To help reduce the risks involved in working with hazardous materials
- To transmit vital information to employees about real and potential hazards of substances in the work place
- To reduce the incidence and cost of illness and injury resulting from hazardous substances
- To promote employee need and right to know
- To encourage a reduction in the volume and toxicity of hazardous substances

Safety Data Sheet (SDS)

The Safety Data Sheet (SDS) is a detailed information bulletin prepared by the manufacturer, distributor, or importer of a chemical that describes the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first-aid procedures, and control measures. Information on an SDS aids in the selection of safe products and helps prepare employers and employees to respond effectively to daily exposure situations as well as to emergency situations.

The SDSs are a comprehensive source of information for all types of employers. There may be information on the SDS that is not useful to you or not important to the safety and health in your particular operation. Concentrate on the information that is applicable to your situation. Generally, hazard information and protective measures should be the focus of concern.

Your Rights

1. Your workplace is required to have Safety Data Sheets available for every single hazardous chemical or substance you use or encounter as a part of your job.

2. These must be readily available for employee review at all times you are in the work place.
3. If you request to see an SDS for a product you use at work, and your employer cannot show it to you, after one working day you may refuse to work with that product until you are shown the correct SDS.
4. If you request your own personal copy of a Safety Data Sheet, your employer has 15 working days to provide it.

If you do not know how to access the SDSs for your area ask your supervisor or instructor!

Employer Responsibilities

Employers must ensure that each employee has a basic knowledge of how to find information on an SDS and how to properly make use of that information. Employers must also ensure the following:

- Complete and accurate SDSs are made available during each work shift to employees.
- Information is provided for each hazardous chemical.

Employers must ensure that the SDSs are readily accessible to employees for all hazardous chemicals in their workplace. This may be done in many ways. For example, employers may keep the SDSs in a binder or on computers. If the employer does not have an SDS, the employer or designated person(s) should contact the manufacturer to obtain one.

Sections of an SDS and Their Significance

What Information is Provided on an SDS?

1. Identification of the chemical and its supplier
2. Hazard(s) Identification
3. Composition/Information on Ingredients
4. First-Aid Measures
5. Fire-Fighting Measures
6. Accidental Release Measures
7. Handling and Storage
8. Exposure Controls/Personal Protection
9. Physical and Chemical Properties
10. Stability and Reactivity
11. Toxicological Information
12. Ecological Information (non-mandatory)*
13. Disposal Considerations (non-mandatory)*
14. Transport Information (non-mandatory)*
15. Regulatory Information (non-mandatory)*
16. Other Information, including date of SDS preparation or last revision

Sections 1 through 8 contain general information about the chemical, identification, hazards, composition, safe handling practices, and emergency control measures. Sections 9 through 11 and 16 contain other technical and scientific information, such as physical and chemical properties, information about stability and reactivity, toxicology, exposure control, and other 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.

OSHA specifies the precise format and headings as well as the information to be included on an SDS. The SDS must be in English (other languages may be included if appropriate) and must include at least the following information:

Section 1. Identification

This section identifies the chemical on the SDS as well as its recommended uses. It also provides the essential contact information of the supplier. Required information:

- Product identifier used on the label and any other common names or synonyms by which the substance is known.
- Name, address, phone number of the manufacturer, importer, or other responsible party, and emergency phone number.
- Recommended use of the chemical (e.g., a brief description of what it actually does, such as flame retardant) and any restrictions on its use (including recommendations given by the supplier).

Section 2. Hazard(s) Identification

This section identifies the hazards of the chemical presented on the SDS and the appropriate warning information associated with those hazards. Required information:

- The hazard classification of the chemical (e.g., flammable liquid, category).
- Signal word
- Hazard statement(s)
- Pictograms (these hazard symbols may be in black and white or be a description of the name of the symbol (e.g., skull & crossbones, flame, etc.))
- Precautionary statement(s)
- Description of any hazards not otherwise classified
- For a mixture that contains an ingredient(s) with unknown toxicity, there will be a statement describing how much (percentage) of the mixture consists of ingredient(s) with unknown acute toxicity. This is a total percentage of the mixture and is 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. Includes information on substances, mixtures, and all chemicals where a trade secret is claimed. Required information:

- **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 that 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. Required information:

- 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. Required information:

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

Section 6. Accidental Release Measures

This section has recommendations on appropriate response to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment. Its recommendations may distinguish between responses for large and small spills where the spill volume has a significant impact on the hazard. Required information:

- 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; absorbent materials; and/or equipment required for containment/cleanup).

Section 7. Handling and Storage

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

- 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. Required information:

- 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.

Required information:

- Appearance (physical state, color, etc.)
- Upper/lower flammability or explosive limits
- Odor
- 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
- Partition coefficient: n-octanol/water
- Auto-ignition temperature
- Decomposition temperature
- 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.

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.

Required information:

- **Reactivity**
 - Description of the specific test data for the chemical(s).
- **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. Health Effects

This section identifies toxicological and health effects information or indicates that such data are not available. Required information:

- 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-term and long-term exposure.
- The numerical measures of toxicity
- 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 Cancer (IARC) Monographs (latest editions) or found to be a potential carcinogen by OSHA.

Section 12. Ecological Information (no enforcement by OSHA)

This section provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment. Since other Agencies regulate this information, OSHA will not be enforcing this section.

Section 13. Disposal Considerations (no enforcement by OSHA)

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. Since other Agencies regulate this information, OSHA will not be enforcing this section.

Section 14. Transport Information (no enforcement by OSHA)

This section provides guidance on classification information for shipping and transporting of

hazardous chemical(s) by road, air, rail, or sea. Since other Agencies regulate this information, OSHA will not be enforcing this section.

Section 15. Regulatory Information (no enforcement by OSHA)

This section identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS. Since other Agencies regulate this information, OSHA will not be enforcing this section.

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.

Container Labeling & Marking Systems

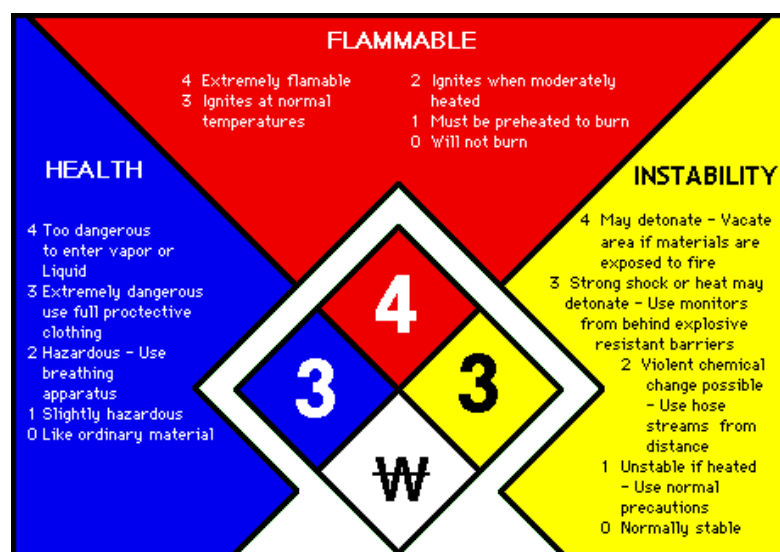
Labels will provide you with a wealth of information you need to know in order to use the product safely.

In addition to the manufacturers label that are provided on most chemical products, VSCC uses two labeling and marking systems:

- National Fire Protection Association (NFPA) diamonds
- Hazardous Materials Labeling System (HMIS) labels

These two systems rely on color coding and a numerical rating system to identify the hazard and its severity. Always read the labels provided on the products you use!!

Key to NFPA Diamond



Blue = Health Hazard

Red = Flammability

Yellow = Instability

White = Special Hazard Information

A numerical rating will also be provided in the blue, red, and yellow diamonds. This number indicates the severity of the hazard, with a 0 indicating no hazard and 4 indicating the most severe hazard.

HMIS Labels

The HMIS labeling system operates on the same principle as the NFPA diamond. Blue indicates health hazard, red indicates flammability, yellow indicates instability, and special information (such as what personal protective equipment to wear) will be provided in the white section. It also uses a numerical system from 0-4 to indicate the severity of the hazard.

These labels should be used on individual containers of hazardous materials (i.e., barrels, bottles, cans, buckets, tubs, etc.) so that there are never any unlabeled containers in the work area. It is recommended that they be used on all containers, even if the manufacturer's label is still in place; however, this is just a recommendation.

Always regard unlabeled containers as dangerous!

If a substance is transferred from its original container into a portable container that is not labeled, the portable container must be labeled with an HMIS label to identify the contents of the container. All unattended containers shall be labeled.

HMIS labels are available in a variety of sizes from EH&S.

HMIS Label

Chemical Name	
CAS#	
HEALTH	<input type="checkbox"/>
FLAMMABILITY	<input type="checkbox"/>
INSTABILITY	<input type="checkbox"/>
SPECIFIC	<input type="checkbox"/>
OKLAHOMA STATE HAZARD COMMUNICATIONS	

Key to HMIS Label Numerical Ratings

HEALTH

4	Deadly: Even the slightest exposure to this substance would be life threatening. Only specialized protective clothing, for these materials, should be worn.
3	Extreme Danger: Serious injury would result from exposure to this substance. Do not expose any body surface to these materials. Full protective measures should be taken.
2	Dangerous: Exposure to this substance would be hazardous to health. Protective measures are indicated.
1	Slight Hazard: Irritation or minor injury would result from exposure to this substance. Protective measures are indicated.
0	No Hazard: Exposure to this substance offers no significant risk to health.

FLAMMABILITY

4	Flash Point Below 73°F and Boiling Point Below 100°F: This substance is very flammable, volatile or explosive depending on its state. Extreme caution should be used in handling or storing of these materials.
3	Flash Point Below 100°F: Flammable, volatile or explosive under almost all normal temperature conditions. Exercise great caution in storage or handling of these materials.
2	Flash Point Below 200°F: Moderately heated conditions may ignite this substance. Caution procedures should be employed in handling.
1	Flash Point Above 200°F: This substance must be preheated to ignite. Most combustible solids would be in this category.
0	Will Not Burn: Substances that will not burn.

INSTABILITY

4	May Detonate: Substances that are readily capable of detonation or explosion at normal temperatures and pressures. Evacuate area if exposed to heat or fire.
3	Explosive: Substances that are readily capable of detonation or explosion by a strong initiating source, such as heat, shock or water. Monitor from behind explosion-resistant barriers.
2	Unstable: Violent chemical changes are possible at normal or elevated temperatures and pressures. Potentially violent or explosive reaction may occur when mixed with water. Monitor from a safe distance.
1	Normally stable: Substances that may become unstable at elevated temperatures and pressures or when mixed with water. Approach with caution.
0	Stable: Substances that will remain stable when exposed to heat, pressure or water.

New Requirements for Manufacturer's Labels

OSHA has updated the requirements for labeling of hazardous chemicals under its Hazard Communication Standard (HCS). As of June 1, 2015, all *manufacturer's* labels will be required to have the following:

- pictograms

- a signal word
- hazard and precautionary statements
- the product identifier
- supplier identification

Supplemental information can also be provided on the label as needed. A sample revised HCS label, identifying the required label elements (*underlined*), is shown below.

<u>SAMPLE LABEL</u>	
<p style="text-align: center;"><u>PRODUCT IDENTIFIER</u></p> <p>CODE _____</p> <p>Product Name _____</p>	<p style="text-align: center;"><u>HAZARD PICTOGRAMS</u></p> <div style="text-align: center;"> </div>
<p style="text-align: center;"><u>SUPPLIER IDENTIFICATION</u></p> <p>Company Name _____</p> <p>Street Address _____</p> <p>City, State _____</p> <p>Postal Code, Country _____</p> <p>Emergency Phone Number _____</p>	<p style="text-align: center;"><u>SIGNAL WORD</u></p> <p style="text-align: center;">Danger</p>
<p style="text-align: center;"><u>PRECAUTIONARY STATEMENTS</u></p> <p>Keep container tightly closed. Store in cool, well ventilated place that is locked. Keep away from heat/sparks/open flame. No smoking.</p> <p>Only use non-sparking tools.</p> <p>Use explosion-proof electrical equipment.</p> <p>Take precautionary measure against static discharge.</p> <p>Ground and bond container and receiving equipment.</p> <p>Do not breathe vapors.</p> <p>Wear Protective gloves.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>Wash hands thoroughly after handling.</p> <p>Dispose of in accordance with local, regional, nation, international regulations as specified.</p> <p>In Case of Fire: use dry chemical (BC) or Carbon dioxide (CO2) fire extinguisher to extinguish.</p> <p>First Aid</p> <p>If exposed call Poison Center.</p> <p>If on skin (on hair): Take off immediately and contaminated clothing. Rinse skin with water.</p>	<p style="text-align: center;"><u>HAZARD STATEMENT</u></p> <p>Highly flammable liquid and vapor. May cause liver and kidney damage.</p> <p style="text-align: center;"><u>SUPPLEMENTAL INFORMATION</u></p> <p>Directions for use</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Fill weight: _____</p> <p>Lot number: _____</p> <p>Gross weight: _____</p> <p>Fill Date: _____</p> <p>Expiration Date: _____</p>

Each standard pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

HCS Pictograms and Hazards

<p>Health Hazard</p>  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	<p>Flame</p>  <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating Gas • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	<p>Exclamation Mark</p>  <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
<p>Gas Cylinder</p>  <ul style="list-style-type: none"> • Gases Under Pressure 	<p>Corrosion</p>  <ul style="list-style-type: none"> • Skin Corrosion/Burns • Eye Damage • Corrosive to Metals 	<p>Exploding Bomb</p>  <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides
<p>Flame Over Circle</p>  <ul style="list-style-type: none"> • Oxidizers 	<p>Environment</p>  <ul style="list-style-type: none"> • Aquatic Toxicity (Non-Mandatory) 	<p>Skull and Crossbones</p>  <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic)

Employee Training and Information

Training Shall be Conducted:

- Within 30 days of initial employment or assignment to a new job.
- Whenever new hazards are introduced into the workplace.
- Annually (as a review)

Employees must be informed of:

- Requirements of regulations
- Any operations in their area where hazardous chemicals are used
- Location and availability of SDS and Plan

Training must cover:

- Method to detect presence of release
- Physical and health hazards
- Measures of personal protection
- Details of Plan

Informing Contractors

It is the responsibility of the Project Manager to provide contractors with information about hazardous chemicals that their employees may be exposed to on a job site and suggested precautions for employees. It is the responsibility of the Project Manager to obtain information about hazardous chemicals used by other employers to which employees of this company may be exposed.

In addition to providing a copy of an SDS to contractors, contractors will be informed of necessary precautionary measures to protect employees exposed to operations performed by Volunteer State Community College.

Also, contractors will be informed of the hazard labels used by the college. If symbolic or numerical labeling systems are used, the contractor will be provided with information to understand the labels used for hazardous chemicals for which their employees may have exposure.

Chemicals introduced to the facility by contractors must also be disposed of by contractors in a manner consistent with state and federal laws and regulations.

List of Hazardous Chemicals

A list of all known hazardous chemicals used by our employees is attached to this plan. Further information on each chemical may be obtained from the SDS, located in the Maintenance department, Biology Lab and the Chemistry Lab.

When new chemicals are received, this list is updated. To ensure any new chemical is added in a timely manner, the following procedures shall be followed:

Shipping and Receiving will make every effort to ensure that an SDS is included with chemical shipment. Original SDS must be sent to the Director of EH&S.

Chemicals in Unlabeled Pipes

Work activities are sometimes performed by employees in areas where chemicals are transferred through unlabeled pipes. Prior to starting work in these areas, the employee shall contact Maintenance and/or the Director of EH&S for information regarding:

- The chemical in the pipes
- Potential hazards
- Required safety precautions.

Program Availability

Copies of this program will be made available to all employees. Please direct requests to the Director of EH&S.