Hazard Communication Plan

Introduction

The Occupational Safety and Health Administration (OSHA) revised the Hazard Communication Standard in May 2012. The revised OSHA Hazard Communication Standard (also known as HAZCOM 2012) now incorporates requirements of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS). This Standard presents the applicable requirements of HAZCOM 2012.

This Hazard Communication Plan complies with the requirements of the OSHA Hazard Communication Standard 1910.1200 and HAZCOM 2012. Implementing the requirements and procedures described in the plan ensures that UNO employees and contractors are aware of the hazards of the chemicals in the workplace as well as the protective measures necessary to prevent harmful exposure.

The Environmental Health and Safety (EHS) Program Director administers the Hazard Communication Plan for UNO.

Purpose

Almost every workplace contains some substances which could pose potential health concerns to employees. UNO recognizes that its employees have the right and need to know the properties and the possible safety and health effects of hazardous chemicals to which they may be exposed. The purpose of this plan is to ensure that the hazards of all chemicals produced or imported are classified, and that information concerning the classified hazards is transmitted to UNO employees.

A hazardous chemical defined by OSHA in 29 CFR 1910.1200 is any chemical which is a physical hazard or a health hazard, i.e., compressed gasses, explosives, flammables, oxidizers, carcinogens, mutagens, teratogens, poisons, irritants, or corrosives. Hazardous chemicals generally have a Safety Data Sheet (SDS) provided by the manufacturer.

Exclusions

Laboratories, workplaces where relatively small quantities of hazardous chemicals are used on a non-production basis, are excluded from this plan and must follow the requirements in the UNO Chemical Hygiene Plan.

This plan does not apply to foods, drugs, cosmetics, or tobacco products intended for personal consumption by the employees while in the workplace. Additionally, this plan does not apply to any consumer products and foods packaged for distribution to (and intended for use by) the general public. Consumer products are packaged and used as a typical consumer would use the product as defined in the Consumer Product Safety Act and the Federal Hazardous Substances Act.

This plan will:

a. Safeguard the health and safety of UNO employees by evaluating all chemicals and sharing chemical hazard information with employees. This information includes container labeling, Safety Data Sheets, other forms of warning, and employee training.
b. Create guidelines to follow for implementation and maintenance of a Hazard Communication Plan.
c. Help ensure compliance with applicable State and Federal standards. These standards include OSHA HAZWOPR 1910.120, OSHA Hazard Communication 1910.1200, and EPA SARA Title III, Emergency Planning and Community Right to Know.
d. Be evaluated periodically through a review team comprised of personnel from Environmental Health & Safety and department designees.

Responsibilities

Environmental Health and Safety

EHS will develop initial training material and periodically evaluate the Hazard Communication Plan. EHS will track all HazCom training.

Department Chairs/Managers

Department Chairs/Managers are responsible for providing information to all their affected employees regarding the Hazard Communication Plan. Responsibilities include:

- Develop, review, and update the departmental Chemical Inventory List, and supply a copy to EHS.
- Ensure Safety Data Sheets (SDSs) for each hazardous chemical in the department is accessible to the affected employees, and a copy sent to EHS.
- Ensure that all containers and storage tanks are appropriately marked, labeled or tagged.
- Provide the following information to all personnel having contact with hazardous substances:
    a. The name of the hazardous chemical.
    b. The correct labeling of each hazardous chemical.
    c. The availability of an SDS for each hazardous chemical present in the immediate work area.
    d. Train and educate employees on work practices, protective measures, and emergency measures in the workplace.

Supervisors

Supervisor responsibilities include:

- Ensure that the manufacturer's labels are not removed or defaced and replace missing labels.
- Maintain an SDS file for their area and prepare, maintain an up to date chemical inventory.
- Send injured or exposed employees to Nebraska Medicine at UNO or outside medical caregiver (after hours) as needed and notify EHS regardless of injury status.
- Enforce the use of proper PPE as directed and recommended by SDS and UNO PPE program.

Employees

Employee responsibilities include

- Ensure that the manufacturer's labels are not removed or defaced and replace missing labels.
- Notify their supervisor immediately if any possible exposure to a hazardous chemical happens at work.

Construction Coordinator/Outside Contractor

UNO Project managers must make sure contractors are aware of chemical hazards when working at UNO. Also, any time an outside contractor brings a hazardous material to the campus an SDS for the material must be made available at the worksite. Outside contractors must comply with the provisions of this Hazard Communication Plan while working at UNO.

Chemical Inventories

All departments must maintain a list of all chemicals in each lab, room, or area. Chemical inventories must consist of chemical names, common names or abbreviations if used and average volumes on-hand. All employees working in the area must have access to the chemical inventory list. Departments will also provide an up to date copy of the chemical inventory list to EHS.

Safety Data Sheets (SDS)

- Supervisors/managers are responsible for creating and maintaining a chemical inventory for their areas and updating them yearly. Please contact EHS at 402.554.3596 for instructions on completing chemical inventories.

- Safety Data Sheets (SDS) must be made immediately available for all chemicals on-hand or used by persons in the work area or department. All persons in the work area

must be able to demonstrate proficiency at producing SDSs, either by showing their location in a binder or selecting them electronically. Print or take a hard copy of the SDS when transporting an injured person to receive medical care for chemical exposure.

- File hard copies of chemical SDSs alphabetically for easy access. File SDSs by trade name, i.e., ZEP Ceramic Tile Cleaner, Chem Treat CL2875, for products like pesticides, cleaning materials, or utility use.
- SDSs must be kept in the department and be readily accessible (all hours) to faculty/staff/students who work with the chemicals.
- If an SDS is missing or not provided by the manufacturer/supplier, it is the responsibility of the ordering department to obtain an SDS from the manufacturer/supplier.
- As of June 1, 2015, all Safety Data Sheets must include 16 sections listed in the following order:

Section 1 Identification:

- The product identifier used on the label and any common names or synonyms which the substance is known.
- Name, address, phone number of manufacturers, importer, or other responsible party, and emergency phone number.
- Recommended use of the chemical (such as a brief description of what it does) and any restrictions on use.

Section 2 Hazard(s) Identification:

- The hazard classification of the chemical.
- Signal word.
- Hazard statement(s).
- Pictograms.
- Precautionary statement(s).
- Description of any hazard 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 toxicity. Note that this is a total percentage of the mixture and not tied to the individual ingredient(s).

Section 3 Composition/information on ingredients:

- The ingredient(s) contained in the product identified on the SDS including impurities and stabilizers. This section includes information on substances, mixtures, and all chemicals where a trade secret is claimed.

Section 4 First-aid measures:

- 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 a fire, such as any hazardous byproducts created when the chemical burns.
- Recommendations of special protective equipment or precautions for firefighters.

Section 5 Firefighting measures:

- 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 a fire, such as any hazardous byproducts created when the chemical burns.
- Recommendations of special protective equipment or precautions for firefighters.

Section 6 Accidental release measures:

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

Section 7 Handling and Storage:

- Precautions for safe handling, including recommendations for handling incompatible chemicals, minimizing release into the environment, and providing

advice on general hygiene practices (e.g., eating, drinking, and smoking in work areas prohibited).
- Recommendations on the conditions for safe storage, including any incompatibilities. Provide advice on specific storage requirements (e.g., ventilation).

Section 8 Exposure control/ personal protection:

- 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 manufacturer, importer, or employer preparing the SDS.
- Appropriate engineering controls (i.e., use local exhaust ventilation, or use only in a closed system).
- Recommendations for personal protective measures to prevent illness or injury from exposure, such as personal protective equipment (PPE) (e.g., eye, face, skin, or respiratory protection needed).
- Any such special requirements for PPE, protective clothing or respiratory protection (e.g., type of glove material and breakthrough time of the glove material).

Section 9 Physical and chemical properties:

- Physical and chemical properties such as appearance, odor, pH, flashpoint etc. associated with the substance or mixture.

Section 10 Stability and Reactivity:

- Reactivity hazards of the chemical and chemical stability. This section is divided into three sections: reactivity, chemical stability, and other.

Section 11 Toxicological Information:

- Toxicological and health effects (i.e. LD50, routes of exposure, symptoms etc.) information or indicates that such data are not available.

Section 12 Ecological Information:

- Any environmental impact of the chemical(s) if it were released to the environment.

Section 13 Disposal considerations:

- Description of appropriate disposal containers to use.
- Recommendations of appropriate disposal methods to employ.
- Description of the physical and chemical properties that may affect disposal activities.
- Language discouraging sewage disposal.
- Any special precautions for landfills of incineration activities.

Section 14 Transport Information (non-mandatory):

- Classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea.

Section 15 Regulatory Information:

- 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:

- Provides 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 may also be included in Section 16.

GHS pictograms, signal words, hazard codes and statements, precautionary statements and labels

All existing chemical container labels must remain intact. Labels must be legible and written in English. Commonly found labels include:

GHS Pictograms

Health Hazard 	Flame 	Exclamation Mark 
• Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	• Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	• Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non Mandatory)
Gas Cylinder 	**Corrosion** 	**Exploding Bomb** 
• Gases under Pressure	• Skin Corrosion/ burns • Eye Damage • Corrosive to Metals	• Explosives • Self-Reactives • Organic Peroxides
Flame over Circle 	**Environment *(Non Mandatory)** 	**Skull and Crossbones** 
• Oxidizers	• Aquatic Toxicity	• Acute Toxicity (fatal or toxic)

GHS Signal Words.

There are only two signal words in GHS: "**Danger**" or "**Warning**." They are used to emphasize chemical hazards and indicate the relative level of severity of the hazard. "**Danger**" indicates more severe hazards

GHS Hazard codes and statements

GHS Hazard codes and statements are a set of standardized phrases about the hazards of chemical substances and mixtures.

Physical Hazard	
Code	**Physical Hazard Statements**
H200	Unstable explosive
H201	Explosive; mass explosion hazard
H202	Explosive; severe projection hazard
H203	Explosive; fire, blast or projection hazard
H204	Fire or projection hazard
H205	May mass explode in fire

H206	Fire, blast or projection hazard: increased risk of explosion if a desensitizing agent is reduced
H207	Fire or projection hazard: increased risk of explosion if a desensitizing agent is reduced
H208	Fire hazard: increased risk of explosion if a desensitizing agent is reduced
H220	Extremely flammable gas
H221	Flammable gas
H222	Extremely flammable aerosol
H223	Flammable aerosol
H224	Extremely flammable liquid and vapour
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H227	Combustible liquid
H228	Flammable solid
H229	Pressurized container: may burst if heated
H230	May react explosively even in the absence of air
H231	May react explosively even in the absence of air at elevated pressure and/or temperature
H232	May ignite spontaneously if exposed to air
H240	Heating may cause an explosion
H241	Heating may cause a fire or explosion
H242	Heating may cause a fire
H250	Catches fire spontaneously if exposed to air
H251	Self-heating; may catch fire
H252	Self-heating in large quantities; may catch fire
H260	In contact with water releases flammable gases which may ignite spontaneously
H261	In contact with water releases flammable gas
H270	May cause or intensify fire; oxidizer
H271	May cause fire or explosion; strong oxidizer
H272	May intensify fire; oxidizer
H280	Contains gas under pressure; may explode if heated
H281	Contains refrigerated gas; may cause cryogenic burns or injury
H290	May be corrosive to metals
Code	Health Hazard Statements
H300	Fatal if swallowed.
H301	Toxic if swallowed
H302	Harmful if swallowed
H303	May be harmful if swallowed
H304	May be fatal if swallowed and enters airways
H305	May be harmful if swallowed and enters airways
H310	Fatal in contact with skin
H311	Toxic in contact with skin

H312	Harmful in contact with skin
H313	May be harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H316	Causes mild skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H320	Causes eye irritation
H330	Fatal if inhaled
H331	Toxic if inhaled
H332	Harmful if inhaled
H333	May be harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H341	Suspected of causing genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H360D	May damage the unborn child
H360F	may damage fertility
H361	Suspected of damaging fertility or the unborn child
H361d	Suspected of damaging the unborn child
H361f	Suspected of damaging fertility
H362	May cause harm to breastfed children
H370	Causes damage to organs
H371	May cause damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H300+H310	Fatal if swallowed or in contact with skin
H300+H330	Fatal if swallowed or if inhaled
H310+H330	Fatal in contact with skin or if inhaled
H300+H310+H330	Fatal if swallowed, in contact with skin or if inhaled
H301+H311	Toxic if swallowed or in contact with skin
H301+H331	Toxic if swallowed or if inhaled
H311+H331	Toxic in contact with skin or if inhaled
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled
H302+H312	Harmful if swallowed or in contact with skin

H302+H332	Harmful if swallowed or if inhaled
H312+H332	Harmful in contact with skin or if inhaled
H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled
H303+H313	May be harmful if swallowed or in contact with skin
H303+H333	May be harmful if swallowed or if inhaled
H313+H333	May be harmful in contact with skin or if inhaled
H303+H313+H333	May be harmful if swallowed, in contact with skin or if inhaled
H315+H320	Causes skin and eye irritation
Environmental Hazards	
Code	**Environmental Hazard Statements**
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long-lasting effects
H411	Toxic to aquatic life with long-lasting effects
H412	Harmful to aquatic life with long-lasting effects
H413	May cause long-lasting harmful effects to aquatic life
H420	Harms public health and the environment by destroying ozone in the upper atmosphere
H433	Harmful to terrestrial vertebrates
GHS Precautionary statements indicate how to handle a product to minimize risks to the user, as well as to other people and the environment.	
Code	**General Precautionary Statements**
P101	If medical advice is needed, have a product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
Code	Prevention Precautionary Statements
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P211	Do not spray on an open flame or other ignition source.
P220	Keep/Store away from clothing/…/combustible materials.
P221	Take any precaution to avoid mixing with combustibles/...
P222	Do not allow contact with air.
P230	Keep wetted with …
P231	Handle under inert gas.

P232	Protect from moisture.
P233	Keep container tightly closed.
P234	Keep only in the original container.
P235	Keep cool.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/…/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P250	Do not subject to grinding/shock/…/friction.
P251	Pressurized container: Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or clothing.
P262	Do not get in eyes, on skin, or clothing.
P263	Avoid contact during pregnancy/while nursing.
P264	Wash…thoroughly after handling
P270	Do not eat, drink, or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wash…thoroughly after handling
P281	Use personal protective equipment as required.
P282	Wear cold insulating gloves/face shield/eye protection.
P283	Wear fire/flame resistant/retardant clothing
P210	Wear respiratory protection.
P284	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P285	In case of inadequate ventilation, wear respiratory protection.
P231 + P232	Handle under inert gas. Protect from moisture.
P235 + P410	Keep cool. Protect from sunlight.
Code	Response Precautionary Statements
P301	IF SWALLOWED:
P302	IF ON SKIN:
P303	IF ON SKIN (or hair):
P304	IF INHALED:
P305	IF IN EYES:
P306	IF ON CLOTHING:
P307	IF exposed:
P308	IF exposed or concerned:
P309	IF exposed or if you feel unwell
P310	Immediately call a POISON CENTER or doctor/physician.

P311	Call a POISON CENTER or doctor/...
P312	Call a POISON CENTER or doctor/... if you feel unwell.
P313	Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P315	Get immediate medical advice/attention.
P320	Specific treatment is urgent (see... on this label).
P321	Specific treatment (see ... on this label).
P322	Specific measures (see ...on this label).
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P332	IF SKIN irritation occurs:
P333	If skin irritation or rash occurs:
P334	Immerse in cool water [or wrap in wet bandages].
P335	Brush off loose particles from skin.
P336	Thaw frosted parts with lukewarm water. Do not rub the affected area.
P337	If eye irritation persists:
P338	Remove contact lenses, if present, and easy to do. Continue rinsing.
P340	Remove the victim to fresh air and keep at rest in a position comfortable for breathing.
P341	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342	If experiencing respiratory symptoms:
P350	Gently wash with plenty of soap and water.
P351	Rinse cautiously with water for several minutes.
P352	Wash with plenty of water/...
P353	Rinse skin with water [or shower].
P360	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P361	Take off immediately all contaminated clothing.
P362	Take off contaminated clothing.
P363	Wash contaminated clothing before reuse.
P364	And wash it before reuse. [Added in 2015 version]
P370	In case of fire:
P371	In case of major fire and large quantities:
P372	Explosion risk.
P373	DO NOT fight fire when fire reaches explosives.
P374	Fight fire with normal precautions from a reasonable distance.
P376	Stop leak if safe to do so.
P377	Leaking gas fire: Do not extinguish unless leak can be stopped safely.
P378	Use ... to extinguish.
P380	Evacuate area.

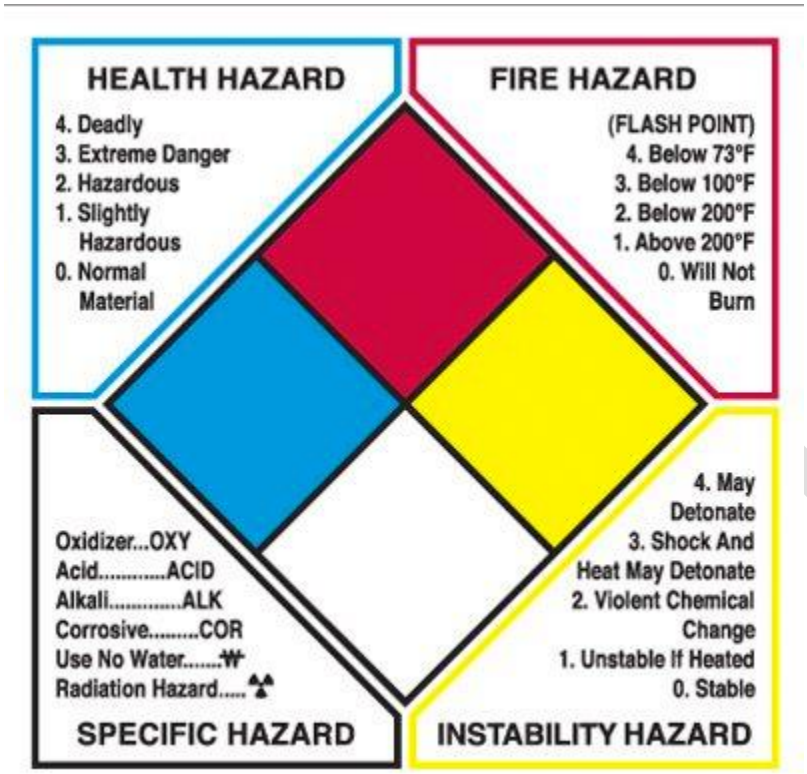
P381	In case of leakage, eliminate all ignition sources.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/... IF you feel unwell.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P334	IF ON SKIN: Immerse in cool water [or wrap in wet bandages].
P302+P335+P334	Brush off loose particles from skin. Immerse in cool water [or wrap in wet bandages].
P302+P350	IF ON SKIN: Gently wash with plenty of soap and water.
P302+P352	IF ON SKIN: wash with plenty of water.
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
P304+P312	IF INHALED: Call a POISON CENTER/doctor/... if you feel unwell.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P306+P360	IF ON CLOTHING: Rinse Immediately contaminated CLOTHING and SKIN with plenty of water before removing clothes.
P307+P311	IF exposed: call a POISON CENTER or doctor/physician.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor/...
P308+P313	IF exposed or concerned: Get medical advice/attention.
P309+P311	IF exposed or if you feel unwell: call a POISON CENTER or doctor/physician.
P332+P313	IF SKIN irritation occurs: Get medical advice/attention.
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P335+P334	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P337+P313	IF eye irritation persists: Get medical advice/attention.
P342+P311	IF experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P376	in case of fire: Stop leak if safe to do so.
P370+P378	In case of fire: Use ... to extinguish.

P370+P380	In case of fire: Evacuate area.
P370+P380+P375	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
P371+P380+P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
Code	Storage Precautionary Statements
P401	Store in accordance with ...
P402	Store in a dry place.
P403	Store in a well-ventilated place.
P404	Store in a closed container.
P405	Store locked up.
P406	Store in corrosive resistant/... container with a resistant inner liner.
P407	Maintain an air gap between stacks or pallets.
P410	Protect from sunlight.
P411	Store at temperatures not exceeding ... °C/...°F.
P412	Do not expose to temperatures exceeding 50 °C/ 122 °F.
P413	Store bulk masses greater than ... kg/...lbs at temperatures not exceeding ... °C/...°F.
P420	Store separately.
P422	Store contents under ...
P402+P404	Store in a dry place. Store in a closed container.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
P411+P235	Store at temperatures not exceeding ... °C/...°F. Keep cool.
Code	Disposal Precautionary Statement
P501	Dispose of contents/container to ...
P502	Refer to manufacturer or supplier for information on recovery or recycling

GHS Label Example

Container label

NFPA 704M, commonly known as NFPA (National Fire Protection Association) label



NFPA Rating Explanation Guide

RATING NUMBER	HEALTH HAZARD	FLAMMABILITY HAZARD	INSTABILITY HAZARD
4	Can be lethal	Will vaporize and readily burn at normal temperatures	May explode at normal temperatures and pressures
3	Can cause serious or permanent injury	Can be ignited under almost all ambient temperatures	May explode at high temperature or shock
2	Can cause temporary incapacitation or residual injury	Must be heated or high ambient temperature to burn	Violent chemical change at high temperatures or pressures
1	Can cause significant irritation	Must be preheated before ignition can occur	Normally stable. High temperatures make unstable
0	No hazard	Will not burn	Stable

RATING SYMBOL	SPECIAL HAZARD
ALK	Alkaline
ACID	Acidic
COR	Corrosive
OX	Oxidizing
	Radioactive
W	Reacts violently or explosively with water
W OX	Reacts violently or explosively with water and oxidizing

This chart for reference only - For complete specifications consult the NFPA 704 Standard

Biohazard Label

Radioactive Label

Labeling responsibility

Supervisors/Managers are responsible for ensuring that each of these chemical containers in the workplace is marked, labeled, or tagged with:

a. The common/trade name of the substance
b. Appropriate hazard warnings: health, flammability, reactivity, and personal protective equipment.

All indoor and outdoor chemical storage tanks, regardless of its size, must be labeled with the identity of the chemical and the associated hazards. Use the National Fire Protection Association (NFPA) diamond (see page 18) or Hazardous Material Identification System (HMIS) label (page 21) to convey the health, flammability, reactivity hazard ratings. For other hazards such as biological, radioactive etc. use appropriate labels (see examples on page 19) or contact EHS for guidance.

All chemicals used by outside service contractors must be appropriately labeled with a manufacturer's label, or other required regulatory labels, or as directed by this plan before using the chemical(s) at University property.

Employees that work in a chemical supply area or shipping/receiving area must ensure that the manufacturer's labels are not damaged or removed. If they are, apply a new label in accordance with the SDS before distribution.

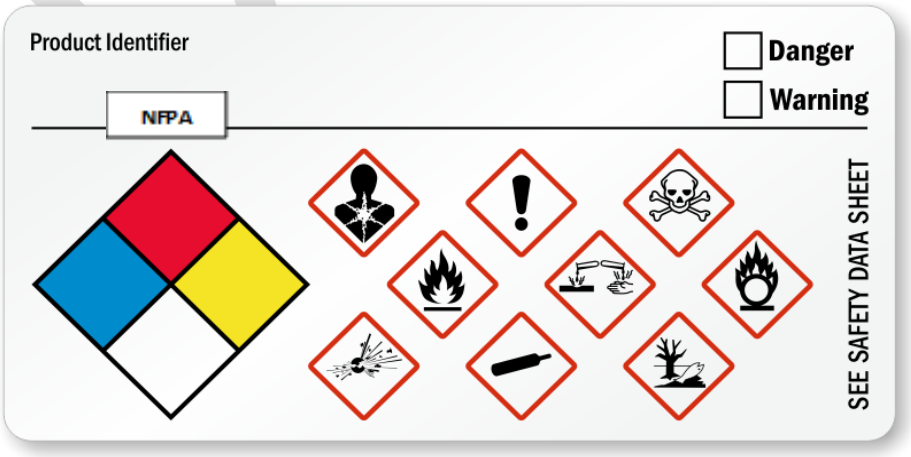
Portable containers

Portable containers are non-original containers, filled with chemical or chemical solutions transferred from a labeled container(s) and must be labeled if:

1. The material is not used within the work shift of the employee making the transfer.
2. The employee that made the transfer leaves the work area.
3. The container is moved to another work area and is no longer in possession of the employee who filled the container.
4. Labels on portable containers are not required if the employee who made the transfer uses all the contents during the work shift.

NOTE: All containers must be legibly labeled regardless of their physical condition

UNO portable container label (Supplemental)



HMIS (Hazardous Materials Identification System) Label

4. Severe Hazard
3. Serious Hazard
2. Moderate Hazard
1. Slight Hazard
0. Minimal Hazard

Exposure

"Exposure" means an occurrence where an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.), and includes potential (e.g. accidental or routine) exposure as referenced by the SDS. When a supervisor discovers that an employee has received a potentially hazardous exposure to any substance or agent, the supervisor must immediately notify the employee and direct him/her to Nebraska Medicine Health Services at UNO or other appropriate medical services for afterhours exposure. Likewise, an employee who has received a potentially hazardous exposure to a substance or agent must immediately notify their supervisor of such exposure.

Training

EHS will provide initial hazard communication training. This training module is located in Canvas Learning Management System (https://www.unomaha.edu/information-technology-services/instructional-technology/canvas/index.php). All UNO employees must receive information on the Hazard Communication Plan annually. The extent of the training information will depend on their work environment, job responsibilities, and hazardous chemicals that they may encounter to perform their job at UNO. All department manager is responsible for enforcing this annual training requirement for their department.

Department Chair/Managers will:

a. Inform employees of hazardous chemical usage within areas where they work.
b. Specify the use of appropriate PPE or any designated engineering control in place (i.e., chemical hood)
c. Provide the location and availability of Safety Data Sheets, chemical inventories, PPE, safety eye wash/shower etc. to employees.
d. Provide training to employees about how to handle and use chemicals safely.

e. Ensure employees take their initial and annual HazCom training.

Documentation of detailed training records provided to employees and others (i.e. contractors) will be maintained by the department chair/manager or designee and send copies of all training records to EHS.

GLOSSARY

Carcinogen - A chemical or physical agent that encourages cells to develop cancer.

CFR - The *Code of Federal Regulations* is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government.

Chemical Inventory - A Chemical Inventory is a list of all chemicals in a given lab, room, or area, listed by chemical name, common name, or abbreviations if used and average volumes on-hand.

Corrosive - A chemical that destroys or irreversibly alters living tissue by direct chemical action at the site of contact.

EHS - UNO *Environmental Health & Safety*.

EPA - The *Environmental Protection Agency* - A federal agency whose primary mission is to protect and enhance our environment.

Explosive - A chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, or high temperature.

Flammable - An aerosol, gas, liquid, or solid that ignites easily or burns rapidly.

HAZWOPR - 29 CFR 1910.120 (OSHA) - *Hazardous waste operations and emergency response.*

HMIS - *Hazardous Materials Information System* - A system similar to the NFPA 704M system, that is used for container labeling. The four quadrants of these labels refer to Health, Fire, Reactivity, and Personnel Protective Equipment.

Irritant - Chemicals that inflame living tissue by chemical action at the site of contact, causing pain or swelling.

SDS - *Material Safety Data Sheet* - A worksheet required by the U.S. Occupational Safety and Health Administration (OSHA) containing information about hazardous chemicals in the workplace. SDSs are used to fulfill part of the hazardous chemical

inventory reporting requirements under the Emergency Planning and Community Right-to-Know Act.

Mutagen - A chemical or physical agent that induces a permanent change in genetic material.

NFPA - *National Fire Protection Association 704M* - A system of container marking to alert firefighters to the characteristics of hazardous materials. The label is diamond-shaped with four quadrants. The left (blue) quadrant represents a health hazard, the top (red) flammability, the right (yellow) reactivity, and the bottom (white) special hazards. Number codes range from 0-4, with 4 representing the most significant hazard.

OSHA - The *Occupational Safety and Health Administration*, part of the Department of Labor.

Oxidizer - A chemical that initiates or promotes combustion in other materials, thereby causing fire of itself or through the release of oxygen or other gases.

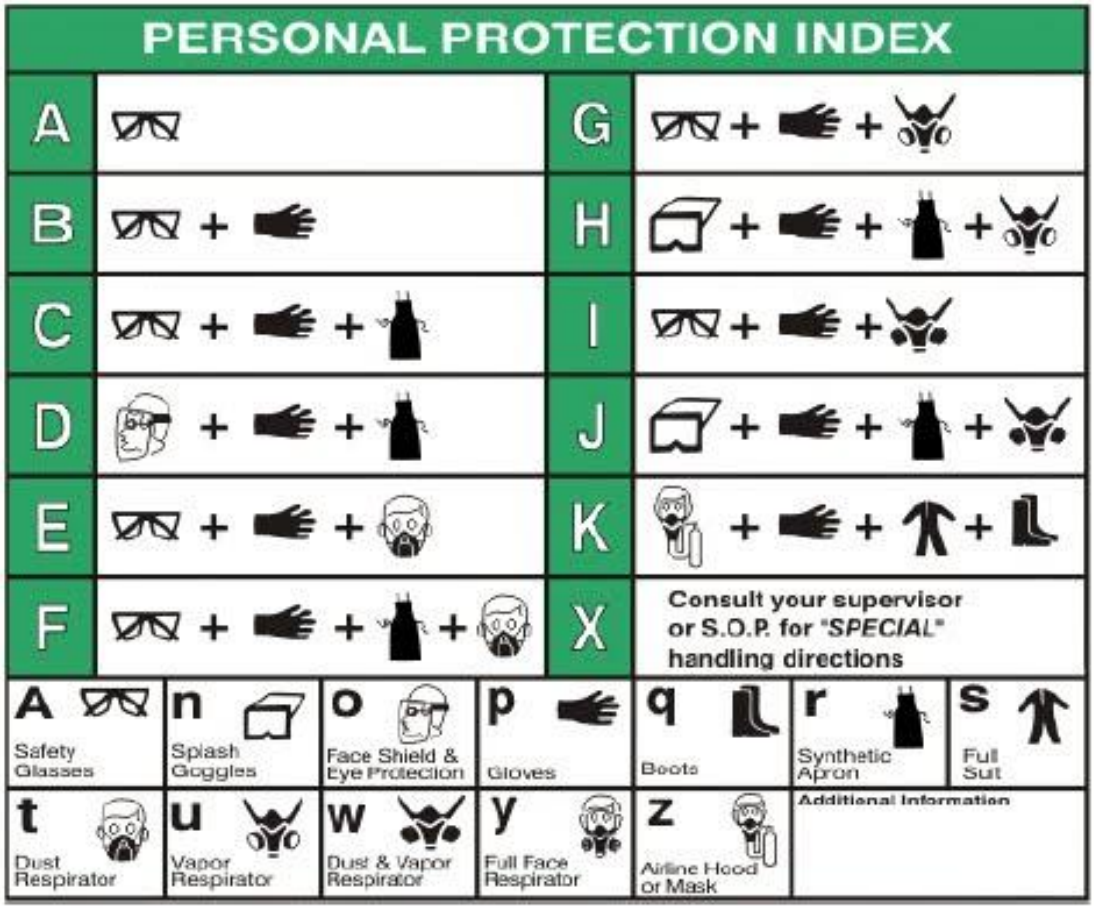
Poison - A chemical that, in relatively small amounts, can produce injury by chemical action when it comes in contact with a susceptible tissue.

SARA - *Superfund Amendments and Reauthorization Act* of 1986.

Teratogen - A material that produces a physical defect in a developing embryo.

Appendix A

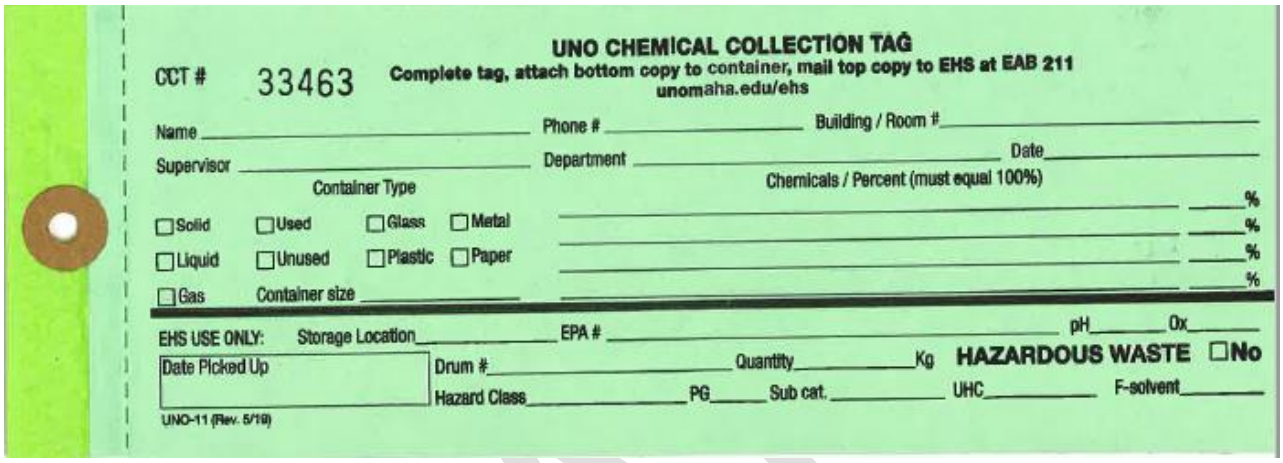
PPE Selection Index for Chemical Hazard



Appendix B

Chemical collection tag (See UNO chemical hygiene plan for details)

Side 1



UNO CHEMICAL COLLECTION TAG

CCT # 33463 Complete tag, attach bottom copy to container, mail top copy to EHS at EAB 211 unomaha.edu/ehs

Name _____ Phone # _____ Building / Room # _____

Supervisor _____ Department _____ Date _____

Container Type

☐ Solid ☐ Used ☐ Glass ☐ Metal

☐ Liquid ☐ Unused ☐ Plastic ☐ Paper

☐ Gas Container size _____

Chemicals / Percent (must equal 100%)

_____ ____%

_____ ____%

_____ ____%

_____ ____%

EHS USE ONLY: Storage Location_____ EPA # _____ pH_____ Ox_____

Date Picked Up

Drum #_____ Quantity_____ Kg HAZARDOUS WASTE ☐No

Hazard Class_____ PG_____ Sub cat._____ UHC_____ F-solvent_____

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Side 2