

UWSP Chemical Hygiene Plan

Particularly Hazardous Substance Use Approval Form

Before using any particularly hazardous substance (PHS), please complete this form and have it approved by your Chemical Hygiene Officer (or designee). See the back of this form for more complete definitions of a PHS and instructions for completing this form.

Name _____ Phone _____ Building/Lab# _____
Department _____ Chemical Hygiene Officer _____

1. Particularly Hazardous Substance Information

- A. Chemical name _____ CAS number _____
- B. PHS Category (Check all that apply)
- | | |
|----------------------------------------------|------------------------------------------------------------|
| <input type="checkbox"/> Carcinogen | <input type="checkbox"/> Reproductive Toxin |
| <input type="checkbox"/> High Acute Toxicity | <input type="checkbox"/> Highly Reactive/Unstable Material |
- C. Estimated Rate of Use (e.g., grams/month) _____
- D. MSDS reviewed and readily available Yes No

2. Hazards

Physical Hazards

- A. Flammable or fire danger Yes No (flashpoint _____) B. Compressed Gas Yes No
- C. Reactive Yes No List Details _____
- D. Temperature sensitive Yes No If yes, list temperature range _____
- E. Unstable Yes No List Details _____
- F. Known incompatibilities _____

Health Hazards (in addition to 1B above)

- G. Significant Route(s) of Exposure
- | | | | |
|-------------------|----------------------------------------------------------|-----------|----------------------------------------------------------|
| Inhalation Hazard | <input type="checkbox"/> Yes <input type="checkbox"/> No | Ingestion | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Skin Exposure | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
- H. Sensitizer Yes No
- I. Corrosive Yes No (pH _____)
- J. Medical Consultation Needed Yes No
- K. Other _____

3. Procedure

Briefly describe how the material will be used and any other hazard information.

4. Exposure Controls

A. Hood required Yes No

If yes, hood currently operates at minimum of 100 feet per minute face velocity Yes No

Hood(s) number or location _____ (See hood sticker for information)

B. Glove box required Yes No

C. Vented gas cabinet required Yes No

D. Personal Protective Equipment (PPE) required (Check all that apply)

Safety glasses Chemical splash goggles Face shield

Gloves (material type _____) Lab coat Apron

Respirator (type _____) Other _____

E. Training Plan in place and completed for affected individuals Yes No

5. Location/Designated Area

A. Building _____ B. Room _____

C. Describe below the area where substance(s) will be used and the method of posting as a designated area.

D. Location where substances will be stored when not in use _____

E. Storage Method/Precautions Required

flammable liquid storage cabinet refrigerator/freezer vented cabinet

away from heat or light inert atmosphere double containment

away from water hood avoid shock or friction

away from incompatible materials other _____

6. Spills and Decontamination

A. Emergency Plan ready Yes No

B. Spill control materials available Yes No Location _____

C. Special PPE needed for spills Yes No Describe _____

D. Decontamination method _____

7. Waste Disposal

A. In-lab neutralization Yes No

B. Deactivation Yes No

C. Dispose as hazardous waste through EHS Yes No

8. Authorization

This individual has demonstrated an understanding of the hazards of the listed substance and plans to handle the substance in a manner that minimizes risk to health and property. He/she is authorized to use the substance in the manner described.

Faculty, PI, or Lab Manager (Print)

Signature

Date

Chemical Hygiene Officer (Print)

Signature

Date

Original to Faculty, PI, or Lab Manager. Copy of form to Chemical Hygiene Officer. Do not use the substance until approval is granted.

Key to Form *

Using this form

For purposes of this form, a particularly hazardous substance (PHS) includes known or suspected human carcinogens, reproductive toxins, substances with acute toxicity above certain thresholds, and highly reactive or unstable materials. A more complete definition is included in the Chemical Hygiene Plan (CHP), Section 5.9.

Each individual planning to use a PHS must complete this form and have it approved by their departmental Chemical Hygiene Officer or designee prior to the initial use.

Responsibility for determining laboratory inventory of PHSs and completing this form rests jointly with the supervisor and the individual seeking use approval. Consultation with Chemical Hygiene Officer and EHS is available.

To simplify the approval process, EHS has developed a list of the PHSs found in Appendix F of the CHP; however, this list is not exhaustive. For help in determining whether a substance meets the PHS criteria, call EHS at 2320.

1. PHS Information

- A. Enter name and CAS (Chemical Abstract Service) number of the PHS. CAS numbers may be found on MSDS or on [TOXNET](#)
- B. See Chemical Hygiene Plan for definitions of each of these items in Section 5.9.
- C. Self-explanatory
- D. MSDS may be available in hard copy or via the internet. Must be on file with Department once chemical is on site.

2. Hazards

Refer to *Physical Properties* section of MSDS or other reference (see App. D of CHP for resources).

- A. *Flammable liquid*: flashpoint $\leq 100^{\circ}$ F
Flammable solid: liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or which can be ignited readily and when ignited burns vigorously. Include other fire dangers such as explosives or combustibles. Oxidizers.
- B. *Compressed Gas*: Need to address hazards posed by using compressed gases (i.e. leaks, cylinder security, storage, etc.)

- C. *Reactive*: May become unstable on contact with water, air, or other (i.e., produces flammable or toxic gas. Spontaneously ignites). List details.
- D. *Temperature Sensitive*: Must be kept within a certain temperature range to ensure stability. List range.
- E. *Unstable*: Substance will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shock, or high or elevated pressure or temperature. Also includes time-sensitive materials, particularly those that produce peroxides over time.. List details.
- F. *Known Incompatibilities*: List chemicals or materials that might cause instability or adverse conditions if mixed with the particularly hazardous substance(s).
- G. *Routes of Exposure: Inhalation*: Inhalation of the substance may cause adverse health effects. *Ingestion*: Ingestion of the substance may cause adverse health effects. *Skin exposure*: Substance is readily absorbed through the skin or can cause significant damage to skin upon contact.
- H. *Sensitizer*: Certain chemicals are known to affect the immune system, causing a person to experience allergic reactions, up to and including anaphylactic shock, upon exposure to the chemical, after the initial sensitization.
- I. *Corrosive*: Causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact.
- J. Some chemicals can accumulate in body tissues and may require initial or periodic medical surveillance. However, no exposures have reached any action levels at UWSP. Contact EHS for more information.
- K. List any other health hazards.

3. Procedure

Describe the part of the experimental procedure that involves the substance, with particular attention to how the chemical will be manipulated and other pertinent details. Add additional pages if necessary.

4. Exposure Controls

- A. A fume hood should be used for chemicals that may produce hazardous air containments (such as vapors, gases, mists, or fumes).
- B. A glove box should be used if protection from atmospheric moisture or oxygen is needed or

* NOTE: Much of the information requested for this form is available from the chemical's material safety data sheet (MSDS) or the container label. See Appendix D in UWSP CHP for many more references.

when a fume hood may not provide adequate protection from exposure to the substance; e.g., a protection factor of 10,000 or more is needed.

- C. Highly toxic gases must be used and stored in a vented gas cabinet. Connection to a laboratory exhaust system may be required for highly toxic gases used in large volumes. Gas feed lines operating above atmospheric pressure must use coaxial tubing.

- D. **PPE. Safety glasses** protect from flying particles and minor chemical splashes, for instance, from opening a centrifuge tube.

Chemical splash goggles should be worn when there is a possibility of a significant chemical splash. Most chemical manipulations, particularly where pressure is involved, warrant chemical splash goggles.

Face shield, worn with splash goggles, provides full face protection when working with large volumes of chemicals.

Gloves should be worn when working with any particularly hazardous substance. Since not all gloves offer significant protection from every chemical, it is important to choose the glove that offers the best resistance. See the MSDS, the CHP or appropriate glove manufacturer compatibility charts for more information. See Appendix D in CHP for more resources.

Lab coats should be worn when working with hazardous substances. The coat should not be worn outside the laboratory and should be laundered separately from other clothing.

Aprons offer chemical resistance and protection from splashes and can be used in conjunction with a lab coat. Choose correct material.

Respirators offer protection from inhalation of substances when engineering controls are not sufficient. Use of respirators must be approved by EHS following the [UWSP RESPIRATORY PROTECTION PROGRAM](#). Proper respirator type must be selected for the hazard present. Contact EHS at 2320 if a respirator is needed.

- E. Training Plan. Requestor must have a plan established to train affected personnel on hazards, protection & control measures, disposal, emergency response, and other relevant information regarding the PHS. EHS is available to assist with training as needed.

- C. Describe where in this room the substance will be used. For example, in a hood, on a specific bench top, in several areas of the laboratory, etc. This room or area must be posted with a *Designated Area* sign available through the department or Chemical Hygiene Officer.

- D. Describe where the substance will be safely stored (e.g., on a shelf, in a refrigerator, in a hood, etc).

- E. Self-explanatory. *Double containment* means that the container will be placed inside another container that is capable of holding the contents in the event of a leak and provides a protective outer covering in the event of contamination of the primary container.

6. Spills and Decontamination

- A. Describe emergency plan in event spill or medical emergency. See [UWSP Emergency Management Plan](#) for guidance.

- B. Self-explanatory.

- C. Self-explanatory.

- D. Describe how the work area will be decontaminated after use, in the event of a spill, or upon completion of the work and before removal of the designated area signage. Add additional pages if necessary.

7. Waste Disposal

- A. Some corrosive chemicals may be neutralized before disposal via the drain or the hazardous waste program.

- B. Some materials can be chemically deactivated before disposal via the drain or the hazardous waste program.

- C. Certain wastes must be disposed of through the hazardous waste program through EHS. Consult with EHS for more information about the hazardous waste program and what must be done with lab wastes products.

Location/Designated Area

A and B. Building and room number where the substance will be used.