

This Chemical Safety Protocol (CSP) covers basic chemical safety information for acutely toxic corrosives and supplements the laboratory Chemical Hygiene Plan as appropriate. The use of any acutely toxic corrosive chemical is subject to pre-approval by the Principal Investigator (PI) and/or designated Laboratory Responsible Safety Person. DO NOT USE ACUTELY TOXIC CORROSIVES UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.

Acutely Toxic Corrosives

Acutely toxic corrosives are materials that can be fatal in small doses and can also cause destruction of exposed tissues. Examples include: propargyl alcohol, acetic anhydride, and various chloroformates. Chemicals covered by this CSP **do not** include hydrofluoric acid, phosgene, or osmium tetroxide.

For more information on each individual hazard type, please refer to the respective 'single hazard' CSP.



Personal Protective Equipment & Personnel Monitoring



Lab Coat

Wear a traditional white lab coat. If your protocol also involves flammable materials, wear a lab apron over a flame-resistant lab coat. A chemical-resistant lab apron should also be used when handling large quantities.



Gloves

Nitrile or neoprene gloves typically provide adequate protection against minor splashes. Consult with your PI or supervisor to determine whether any materials involved in your process require alternative hand protection. Consult glove selection chart for heavy handling of corrosives.

Do not wear latex gloves.



Eye Protection

ANSI Z87.1-compliant safety glasses or safety goggles, or face shield if a splash hazard is present.



Face Shield

Labeling & Storage

Store upright & tightly closed in a secondary container located in a dry and well-ventilated place. Keep away from incompatible materials (e.g., segregate acids and bases). Each container's label must include appropriate pictograms and identify the material as both acutely toxic and corrosive. Always store corrosives in chemically-resistant secondary containers (e.g., polypropylene trays or tubs) below eye level. The secondary container's label must include appropriate pictograms and identify the material as both acutely toxic and corrosive. Also, if not plainly visible (e.g., through a cabinet window), labeling must be applied to storage locations where these are stored to avoid an inadvertent encounter.

Engineering Controls, Equipment & Materials

Fume Hood

Use a fume hood when working with materials which are toxic by inhalation. If your protocol does not permit the handling of such materials in a fume hood, contact the Department of Environmental Health, Safety and Sustainability (EHSS) to determine whether additional respiratory protection is warranted.

Housekeeping

Spills

Notify others in the area of the spill, including your PI/Responsible Safety Person. If it is a small spill that you can easily handle, use the contents of your lab spill kit to clean it up. If it is a large spill, then evacuate the area where the spill occurred. Call Vanderbilt University Public Safety (VUPS) at 615-421-1911 (mobile) or use the VandySafe app on your smart phone. Report any exposure through Risk and Insurance Management's Origami portal and mark that it occurred in research when prompted. Both VUPS and the Origami system will notify EHSS of the incident. Remain on site at a safe distance to provide detailed information to first responders.

Decontamination

Decontamination methods will vary based on the materials handled and equipment being used. Please review the chemical Safety Data Sheet for guidance on cleaning materials. Dispose of the used chemical and contaminated disposables as hazardous waste following the guidelines in the CHP.

Waste

Refer to the laboratory *Chemical Hygiene Plan* (Section 6.7) for information on proper chemical waste disposal procedures. Please note that some acute toxicants may be considered 'Extremely Hazardous' when disposed of as waste.

First Aid & Emergencies

Skin Contact

Immediately remove contaminated clothing and shoes; flush skin with water for at least 15 minutes. Get medical attention immediately.

Eye Contact

Check for and remove contact lenses. Immediately flush eyes with water for at least 15 minutes. Get medical attention immediately.

Inhalation

Move person into fresh air. Get medical attention immediately.

Ingestion

Get medical attention immediately.

