

Principal Investigator: _____

Date Approved: _____

This document covers basic chemical safety information for corrosive flammables and supplements the laboratory Chemical Hygiene Plan as appropriate. The use of any corrosive, flammable chemical is subject to pre-approval by the Principal Investigator (PI) and/or designated Laboratory Responsible Safety Person. DO NOT USE CORROSIVE FLAMMABLES UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.

Corrosive Flammables

Corrosive flammables are materials that can cause destruction of exposed tissues and are defined by the National Fire Protection Agency (NFPA) as having a flashpoint below 100°F (37.8°C). Examples include: acetic acid, triethylamine, N,N,N',N'-tetramethylethylenediamine (TEMED), n-butanol, and n-propanol.



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

Personal Protective Equipment & Personnel Monitoring

**Lab Coat**

Flame-resistant lab coat and a chemical-resistant lab apron.

**Gloves**

Nitrile or neoprene gloves. 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

Corrosive flammables should be stored in a flammable storage cabinet with self-closing hinges or in a refrigerator rated for flammable storage. Any container greater than 1 gallon (4L) in size must be stored in a flammable storage cabinet. Limit the amount of flammables allowed outside a flammable storage cabinet, safety can, or approved refrigerator. Keep away from oxidizers, incompatible corrosives (e.g., segregate acids and bases), and combustible materials. Always store strong and/or concentrated acids and bases in chemically-resistant secondary containers (e.g., polypropylene trays or tubs). Containers holding corrosives must be stored below eye level. 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

It is advisable to use a fume hood when working with these materials. 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.

Cautions & Considerations

Static Electricity

Large containers of flammable chemicals should always be grounded and should be bonded to the receiving container during transfer. Always transfer flammable chemicals from glass containers to glassware or from glass container/glassware to plastic. Transferring these types of chemicals between plastic containers or unbonded metal containers may lead to a fire hazard due to static electricity.

Housekeeping

Keep acid and/or base neutralizer in your spill kit to use or provide to VUPS during spill cleanup.

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 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.

Waste

Refer to the laboratory *Chemical Hygiene Plan* (Section 6.7) for information on proper chemical waste disposal procedures.

First Aid & Emergencies

Skin or Eye Contact

Remove contaminated clothing and accessories; flush affected area with water. If symptoms persist, get medical attention.

Inhalation

Move person into fresh air. If symptoms persist, get medical attention.

Ingestion

Rinse mouth with water. If symptoms persist, get medical attention.

