

Principal Investigator: _____

Date Approved: _____

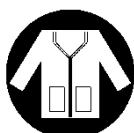
This document covers basic chemical safety information for flammables and supplements the laboratory Chemical Hygiene Plan as appropriate. The use of any flammable chemical is subject to pre-approval by the Principal Investigator (PI) and/or designated Laboratory Responsible Safety Person. DO NOT USE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

Flammables

A flammable solvent is defined by the National Fire Protection Agency (NFPA) as having a flashpoint below 100 °F (37.8 °C). The flashpoint is the lowest temperature at which a material can form an ignitable mixture with air and produce a flame when an ignition source is present. The lower the flashpoint, the more easily the liquid can be ignited.



Personal Protective Equipment & Personnel Monitoring

**Lab Coat**

Flame-resistant lab coat.

**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.

**Eye Protection**

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

Labeling & Storage

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 should be stored in a flammable storage cabinet. Limit the amount of flammables allowed outside a flammable storage cabinet, safety can, or approved refrigerator. All flammables must be stored away from combustible materials, oxidizing acids and oxidizers. Also, if not plainly visible (e.g., through a cabinet window), labelling must be applied to storage locations where these are stored to avoid an inadvertent encounter.

Engineering Controls, Equipment & Materials

Fume Hood

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 alternative engineering controls or 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

If the volume is small (<100 mL) and there is no inhalation hazard, 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.

Spills

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

Fire

DO NOT use water to put out fire, instead use a Class B fire extinguisher.

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.

