Introduction
This SOP applies to the various chemicals that are Flammable. Flammables fall under the following categories:

► Flammable gas – a gas that, at STP, forms a flammable mixture with air at a concentration of 13% by volume or less OR that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than 12% by volume, regardless of the lower limit.

► Flammable liquid – a liquid having a flash point below 100°F.

► Flammable solid – a solid, other than a blasting agent or explosive, that (1) has an ignition temperature below 212°F, or (2) is capable of causing a fire through friction, absorption of moisture, or spontaneous chemical change, or (3) burns so vigorously and persistently as to create a serious hazard.

► Combustible liquid – a liquid having a flash point at or above 100°F (definition listed for storage considerations).

POTENTIAL HAZARDS

► Fire is the main hazard with Flammables.

► Never use flammable materials near sources of heat, flame, sparks or static discharge (direct sunlight, furnaces, pilot lights etc.)

► Do not use in unventilated areas. Use in fume hood.

► Vapors are heavier than air. These can pool in low-lying areas and travel significant distances to an ignition source.

Health Hazards

HEALTH HAZARD INFORMATION

Signal word: Danger

Hazard statement(s):

H224 Extremely flammable liquid and vapour.

H302 Harmful if swallowed.

H320 Causes eye irritation.

H336 May cause drowsiness or dizziness.

H402 Harmful to aquatic life.
## Personal Protective Equipment

### EYE PROTECTION
- Safety glasses, goggles or face shields shall be worn during operations in which Flammables might contact the eyes (e.g., through vapors or splashes of solution).
- Ordinary (street) prescription glasses do not provide adequate protection. Adequate safety glasses must meet the requirements of the Practice for Occupational Education Eye and Face Protection (ANSI Z87.1-1989) and must be equipped with side shields.

### HAND PROTECTION
- Use disposable nitrile gloves when working with chemicals. Check chemical compatibility chart for breakthrough time when using Flammables.
- Laboratory personnel should thoroughly wash hands with soap and water before and immediately upon removal of gloves.

### LAB COATS, ETC.
- Button lab coats, closed toed shoes, long pants and long sleeved clothing shall be worn when handling Flammables. Protective clothing shall be worn to prevent any possibility of skin contact with Flammables.

## Work Practices

- Work in a chemical fume hood if air concentrations above 10% of the lower flammable limit may be reached, if the chemical is irritating to the eyes and respiratory system, and/or is toxic by inhalation. Contact Facilities and Campus Services (x4255) immediately if fume hood is malfunctioning.
- Know the location of the nearest fire extinguisher before beginning work.
- Avoid using ignition sources (Bunsen burners, hot plates, electrical equipment with frayed or cracked wiring, etc.) and/or creating static electricity in areas where highly flammable chemicals are used.
- Ensure proper grounding. Be sure to ground metal containers when transferring flammable liquids.
- Keep containers of flammable chemicals closed at all times when not in use to prevent accumulation of flammable vapor concentrations.
Standard Operating Procedure (SOP)

FLAMMABLES

Effective Date: 8/23/2013    Revised Date: 10/6/2022

Special Handling Procedures and Storage Requirements

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

X — Must not be stored together
0 — May be stored together with specific precautions
+ — May be stored together

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

Waste Disposal

➢ DO NOT open or move any ETHER container that has developed crystals at the lid. Call x3427 immediately.
➢ Ether must be checked for the presence of peroxides prior to removal.
➢ Excess Flammables and all waste material containing Flammables must be placed in a container labeled with the following “HAZARDOUS WASTE Flammables”.
➢ Contact EHS at x3427 for hazardous waste removal.

Emergency Numbers

Emergency Numbers:

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire and Medical Emergencies</td>
<td>x5911 (911 on cell phone)</td>
</tr>
<tr>
<td>Environmental Health and Safety</td>
<td>x3427</td>
</tr>
<tr>
<td>FastMed Urgent Care (employees)</td>
<td>(336) 714-4616</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Student Health</td>
<td>x5218</td>
</tr>
<tr>
<td>(students only)</td>
<td></td>
</tr>
<tr>
<td>Poison Control</td>
<td>800-222-1222</td>
</tr>
</tbody>
</table>

First Aid

<table>
<thead>
<tr>
<th>Condition</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swallowed</td>
<td>Give water (if conscious). Seek medical advice. Do NOT give milk or oil. Do NOT give alcohol.</td>
</tr>
<tr>
<td>Eye</td>
<td>Wash with running water.</td>
</tr>
<tr>
<td>Skin</td>
<td>Remove contaminated clothing. Wash with soap &amp; water.</td>
</tr>
<tr>
<td>Inhaled</td>
<td>Fresh air. Rest, keep warm. If breathing shallow, give oxygen. Medical attention.</td>
</tr>
<tr>
<td>Advice To Doctor</td>
<td>Treat symptomatically.</td>
</tr>
</tbody>
</table>

Spill and Accident Procedure

MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb small quantities with vermiculite or other absorbent material.
- Wipe up.
- Collect residues in a flammable waste container.