



Flammable Liquids and Solids

H224 H225 H226 H227 H228



Areas with blue text indicate that information must be provided or modified by researcher prior to the SOP approval.

This SOP is not a substitute for hands-on training.

Print a copy and insert into your laboratory SOP binder.

Department:	Chemistry
Date SOP was written:	Monday, October 24, 2016
Date SOP was approved by PI/lab supervisor:	
Principal Investigator:	Name: R. Sarpong
	Signature: _____
Internal Lab Safety Coordinator or Lab Manager:	Name: Melissa Hardy/Justin Jurczyk
	Lab Phone: 406-696-1225/412-728-1952
	Office Phone: 510-642-6312
Emergency Contact:	Name: Melissa Hardy/Justin Jurczyk
	Lab Phone: 406-696-1225/412-728-1952
Location(s) covered by this SOP:	Latimer Hall 831,832,834,836,837,838,839,842,844,847,849

1. Purpose

This SOP covers the precautions and safe handling procedures for the use of Flammable Liquids and Solids.

For a list of Flammable Liquids and Solids covered by this SOP and their use(s), see "List of Chemicals". Procedures described in Section 12 apply to all materials covered in this SOP.

If you have questions concerning the applicability of any recommendation or requirement listed in this procedure, contact the Principal Investigator/Laboratory Supervisor or the campus Chemical Hygiene Officer at ucbcho@berkeley.edu.



2. Physical & Chemical Properties/Definition of Chemical Group

Flammable liquid means a liquid having a flash point¹ of not more than 199.4 °F (93 °C).

Combustible liquid means a liquid having a flash point higher than 199.4 °F (93 °C).

Flammable solid means a solid which is readily combustible² or may cause or contribute to fire through friction.

3. Potential Hazards/Toxicity

Flammable and combustible liquids are defined by their flash point.

Flammable liquids are divided into 4 categories:

- **Category 1** includes liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point at or below 95 °F (35 °C)
- **Category 2** includes liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point above 95 °F (35 °C)
- **Category 3** includes liquids having flashpoints at or above 73.4 °F (23 °C) and at or below 140 °F (60 °C).
- **Category 4** includes liquids having flashpoints above 140 °F (60 °C) and at or below 199.4 °F (93 °C)

Flammable solids are divided into 2 categories based on their burning rate and resistance to being extinguished:

- **Category 1** – rapidly burning materials very resistant to being extinguished by water
- **Category 2** – slower burning materials that may be extinguished by water

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) designates flammable liquids and solids by one or more of the following H codes:

- H224** Extremely flammable liquid and vapor
- H225** Highly flammable liquid and vapor
- H226** Flammable liquid and vapor
- H227** Combustible liquid
- H228** Flammable solid

Flammable liquids and solids may also have other hazardous properties in addition to toxicity. Safe use requires assessing all potential hazards.

It is the Principal Investigator's responsibility to ensure activity-specific laboratory procedures and/or processes are taken into account when using this Chemical Class SOP.

Please, review the SDS of any chemical before use (see Section 11 – SDS Location).

¹ Flash point: lowest temperature at which the application of an ignition source causes vapors of a liquid to ignite under specified conditions.

² Readily combustible solids are powdered, granular or pasty substances which are dangerous if they can be easily ignited by brief contact with an ignition source and if the flames spread rapidly.



4. Engineering Controls

Use the engineering controls listed below unless other lab-specific information is included in the Protocol/Procedure section.

- Work with Flammable Liquids and Solids – the work must be conducted in a fume hood unless other controls are designated in the lab-specific Protocol/Procedure section. Sash height must be kept as low as possible to avoid escaping fumes and provide a physical barrier.
- Laboratories and rooms where Flammable Liquids and Solids are used must have general room ventilation that is negative pressure with respect to the corridors and external environment. The laboratory/room door must be kept closed at all times.

5. Personal Protective Equipment

At a minimum, the following PPE must be worn at all times.

Eye and Face Protection

- A. ANSI Z87.1-compliant safety glasses with side shields, or chemical splash goggles.
 - Ordinary prescription glasses will NOT provide adequate protection unless they also meet ANSI standard and have compliant side shields.
- B. If the potential for explosion/splashing exists, and adequate coverage is not provided by the hood sash, a face shield must be worn.

Skin and Body Protection

- A. Gloves are required when handling hazardous chemicals.
 - Refer to specific chemical SDS for information on glove selection.
 - For additional information on glove selection, go to:
<http://ehs.berkeley.edu/hs/63-laboratory-safety/94-glove-selection-and-usage.html>
- B. Lab coats are required when handling hazardous chemicals in the lab. Select the type of lab coat according to the hazards at the specific workplace.
 - Flame-resistant lab coat (Nomex IIIA, NFPA 2112) must be worn if handling large quantities (>1 liter) or when working near an open flame or ignition source.
 - *Exception to this requirement is for conducting **Flame Sterilization** following the campus approved SOP.*
 - Long pants, closed-toe/closed-heel shoes, covered legs, and ankles.

Respiratory Protection

Respiratory protection is normally not required for UC Berkeley laboratory activities. Any lab personnel considering the use of a respirator (e.g. N-95 respirator, dust mask) must contact EH&S for a workplace assessment.

6. First Aid Procedures and Medical Emergencies

In the event of an injury, notify your supervisor immediately and EH&S within 8 hours.



Go to the Occupational Health Facility (Tang Health Center, on campus); if after hours, go to the nearest emergency room (Alta Bates, 2450 Ashby Ave in Berkeley); or



Call 911 (from a cell phone: 510-642-3333) if:



- *it is a life threatening emergency; or*
- *you are not confident in your ability to fully assess the conditions of the environment and/or the condition of the contaminated/injured person, or you cannot be assured of your own safety; or*
- *the contaminated/injured person is not breathing or is unconscious.*

Please remember to provide a copy of the appropriate manufacturer SDS (if available) to the emergency responders or physician. At a minimum, be ready to provide the identity/name of any hazardous materials involved.

In case of skin contact

If skin contact occurs, and/or skin or clothing are on fire, immediately drench in the safety shower with copious amounts of water for no less than 15 minutes to remove any remaining contaminants. If possible to do so without further injury, remove any remaining jewelry or clothing.

In case of eye contact

Rinse thoroughly with plenty of water using an eyewash station for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses if possible.

If swallowed

Do NOT induce vomiting unless directed otherwise by the SDS. Never give anything by mouth to an unconscious person. Rinse mouth with water.

If inhaled

Move into fresh air.

Needle stick/puncture exposure

Wash the affected area with antiseptic soap and warm water for 15 minutes.

7. Special Handling, Storage, and Disposal Requirements

Lab-specific information on handling and storage may be included in Section 12-Protocol/Procedure.

Bonding and grounding

- All containers of 4L (1 gal) or more of Category 1, 2 and 3 Flammable Liquids must be bonded and grounded during dispensing. For guidance on bonding and grounding, please contact EH&S.
- **Transfers of flammable liquids without bonding and grounding are allowed when dispensing between containers of 4L (1gal) or less.**

Precautions for Safe Handling

- Eliminate or substitute for a less hazardous material when possible.
- Design your experiment to use the least amount of material possible to achieve the desired result.
- Do not exceed the scale of procedures specified in Protocol/Procedure section without approval of the PI.
- Verify your experimental set-up and procedure prior to use.
- Know the location of the nearest eyewash, safety shower and fire extinguisher before beginning work.
- Upon leaving the work area, remove any personal protective equipment worn and wash hands.
- At the end of each project, thoroughly decontaminate the work area according to the material being handled.



Conditions for Safe Storage

- No more than 10 gallons of flammable materials, including hazardous waste, can be stored outside of a flammable storage cabinet.
- It is best practice to store flammable liquids in flammable storage cabinets with self-closing doors and latching mechanism.
- Chemicals that require refrigeration must be stored appropriately in a U.L. Listed flammable refrigerator/freezer. They are designed to prevent ignition of flammable vapors inside the storage compartment. Explosion proof refrigerators/freezers require special wiring rather than the simple plug-in type power cord. Consult with UC Berkeley Fire Prevention Office before purchasing an explosion proof refrigerator/freezer.
- Flammable storage cabinets must be clearly marked (e.g. “Flammable Storage” or “Flammable”).
- If stored outside a flammable storage cabinet, flammable liquids and solids must be stored away from ignition sources.

Disposal

- Waste materials generated must be treated as a hazardous waste.
- The empty container must be rinsed three times with a COMPATIBLE solvent; leave it open in the back of the hood overnight. Solvent rinses and water rinse must be disposed of as hazardous waste.
- As an alternative, unrinsed empty containers can be disposed of through EH&S as hazardous waste. The unrinsed empty containers must be capped.
- Do not mix with incompatible waste streams.

8. Chemical Spill

Spill – Assess the extent of danger; if necessary request help by calling **911** (from a cell phone: **510-642-3333**) for emergency assistance or 510-642-3073 for non-life threatening situations. If you cannot assess the conditions of the environment well enough to be sure of your own safety, do not enter the area. If possible help contaminated or injured persons. Evacuate the spill area. Avoid breathing vapors from spill. If possible, confine the spill to a small area using a spill kit or absorbent material. Keep others from entering contaminated area (e.g., use caution tape, barriers, etc.).

- **Minor Spill** – In the event of a minor spill, if there is no potential for hazardous chemical exposure, report the spill to 510-642-3073 and if you are trained, proceed to clean it. Use appropriate personal protective equipment and clean-up material for chemical spilled. Double bag spill waste in clear plastic bags, label and request pick-up.
- **Major Spill** – Any hazardous chemical spill that involves chemical exposure, any chemical spill that due to size and/or hazard requires capabilities beyond your training, or any chemical spill that gives the perception (because of odor, for example) that there has been a hazardous release. Call **911** or 510-642-3073 for assistance.

9. Cleaning and Decontamination

Lab-specific information on decontamination may be included in Section 12 - Protocol/Procedure.

- Wearing proper PPE, laboratory work surfaces must be cleaned at the conclusion of each procedure and at the end of each work day.
- Decontaminate all equipment before removing from a designated area.



10. Hazardous Waste Disposal

Label Waste

- Label all waste containers. See the EH&S Fact Sheet, “Hazardous Waste Management” for general instructions on procedures for disposing of hazardous waste.

Dispose of Waste

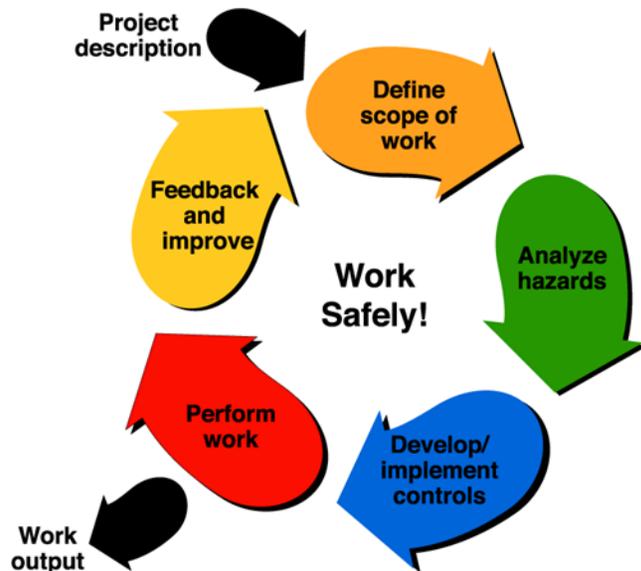
- Dispose of regularly generated chemical waste within 6 months.
- Contact EH&S at 642-3073 if you need assistance.

11. Safety Data Sheet (SDS) Location

SDS can be accessed online at <http://ucsd.com>



-Take Ownership of Your Safety-



Before starting any work, ask yourself:

- 1- **What will I be doing?**
- 2- **Do I know what the hazards are?**
- 3- **Do I have everything I need to do the job safely?**
- 4- **Am I doing the job safely?**
- 5- **What can we do better?**



12. Protocol/Procedure for – Flammable Liquids and Solids

Section 12 must be customized to your specific needs. Delete any procedure that does not apply to your laboratory.

Procedure/Use	Scale	Engineering Controls/Equipment	PPE (eye, face, gloves, clothing)	Procedure Steps and Special Precautions for this Procedure
<p>1. Using Flammable Liquids and Solids as reagents.</p>	<p>Up to 500 mL or 10 g as supplied in the reagent bottle.</p> <p style="color: red;">Remember to obtain PI approval if higher scale is necessary.</p>	<p>All reactions using these materials must be performed in a properly operating fume hood with the sash as low as possible. Or in an inert atmosphere glovebox.</p>	<p>Eye protection: Wear ANSI Approved tight-fitting safety goggles or safety glasses with side shields.</p> <p>Face Protection: Face shields are to be used when there is no protection from the hood sash.</p> <p>Hand Protection: Confirm compatibility of glove material with chemical being used. General guidance (unless otherwise specified in the specific SDS): Nitrile gloves must be used to prevent incidental contact. For spill handling or for potential contact with larger quantities, use double nitrile or heavier gauge nitrile or neoprene gloves. Gloves must be inspected prior to use. Wash and dry hands after use.</p> <p>Clothing: Wear lab coat; full length pants or equivalent; and close-toed, close-heeled shoes.</p>	<p>Avoid the formation of dusts with solids. Carefully weigh reagent in an enclosed or vented area. If this is not possible use the tared vessel method and cap the vessel during transport to and from the balance. Use a secondary container for transport of the tared vessel.</p> <p>Immediately move all operations to the fume hood when weighing is complete.</p> <p>In a properly functioning fume hood, add reagent to the reaction vessel.</p> <p>If the reagent is a liquid, dispense and transfer to the reaction vessel using the appropriate technique (syringe, pipettor, or cannula method).</p>
Notes	Any deviation from this SOP requires approval from PI.			



Procedure/Use	Scale	Engineering Controls/Equipment	PPE (eye, face, gloves, clothing)	Procedure Steps and Special Precautions for this Procedure
<p>2. Using Flammable Liquids as solvents in reactions, for extractions.]</p>	<p>Up to 4 L as supplied in the reagent bottle.</p> <p style="color: red;">Remember to obtain PI approval if higher scale is necessary.</p>	<p>All reactions using these materials must be performed in a properly operating fume hood with the sash as low as possible. Or in an inert atmosphere glovebox.</p>	<p>Eye protection: Wear ANSI Approved tight-fitting safety goggles or safety glasses with side shields.</p> <p>Face Protection: Face shields are to be used when there is no protection from the hood sash.</p> <p>Hand Protection: Confirm compatibility of glove material with chemical being used. General guidance (unless otherwise specified in the specific SDS): Nitrile gloves must be used to prevent incidental contact. For spill handling or for potential contact with larger quantities, use double nitrile or heavier gauge nitrile or neoprene gloves. Gloves must be inspected prior to use. Wash and dry hands after use.</p> <p>Clothing: Wear lab coat; full length pants or equivalent; and close-toed, close-heeled shoes.</p>	<p>Avoid inhalation of these materials.</p> <p>If a rotary evaporator is used, use an open cold trap system to condense the solvent.</p> <p>Pressure can be built up when these solvents are used in closed reaction vessels. Adequate ventilation (e.g. pressure bubbler on Schlenk manifold, or an equilibrating balloon) must be used to prevent dangerous over pressurization.</p> <p>Pressure may be built up when performing extractions. Adequate ventilation (open the valve frequently during the extraction) has to be used to prevent dangerous over pressurization. The vapor in such a process must be released in a fume hood.</p> <p>If heated, the reaction apparatus has to be fitted with an adequately sized condenser and an adequate flow of cooling water has to be provided to prevent evaporation. Cooling hoses have to be secured with hose clamps to the condenser and the outlet. </p>
Notes	Any deviation from this SOP requires approval from PI.			



Procedure/Use	Scale	Engineering Controls/Equipment	PPE (eye, face, gloves, clothing)	Procedure Steps and Special Precautions for this Procedure
<p>3. Using Flammable Liquids as solvents in column chromatography (CC) or thin layer chromatography (TLC). </p>	<p>Up to 4 L as supplied in the reagent bottle.</p> <p style="color: red;">Remember to obtain PI approval if higher scale is necessary.</p>	<p>All reactions using these materials must be performed in a properly operating fume hood with the sash as low as possible. Or in an inert atmosphere glovebox.</p>	<p>Eye protection: Wear ANSI Approved tight-fitting safety goggles or safety glasses with side shields.</p> <p>Face Protection: Face shields are to be used when there is no protection from the hood sash.</p> <p>Hand Protection: Confirm compatibility of glove material with chemical being used. General guidance (unless otherwise specified in the specific SDS): Nitrile gloves must be used to prevent incidental contact. For spill handling or for potential contact with larger quantities, use double nitrile or heavier gauge nitrile or neoprene gloves. Gloves must be inspected prior to use. Wash and dry hands after use.</p> <p>Clothing: Wear lab coat; full length pants or equivalent; and close-toed, close-heeled shoes.</p>	<p>Avoid inhalation of these materials.</p> <p>Thin Layer Chromatography: allow the plate to dry in the fume hood after removal from the development bath.</p> <p>Column Chromatography: collect fractions of interest and concentrate as needed.</p> <p>If a rotary evaporator is used, use an open cold trap system to condense the solvent.</p> <p>After use in the column, allow the solvent to evaporate from the packing material prior to proper disposal of the packing material. </p>
Notes	Any deviation from this SOP requires approval from PI.			



Appendix – Table Comparing GHS and NFPA 30 Nomenclatures

NFPA 30 has not changed their nomenclature of the “classes” of flammable liquids to “categories” and also still distinguished between flammable liquids and combustible liquids. For clarity, the equivalency chart is included as a convenience.

Flash Point (FP)	Flammable Liquid <i>Category</i> (GHS)	Flammable <i>And</i> Combustible Liquid <i>Class</i> (NFPA 30)
FP Below 73.4°F (23°C)/ AND Boiling Point (BP) at or below 95°F (35°C)	Category 1	Class IA
FP Below 73.4°F (23°C)/ AND BP above 95°F (35°C)	Category 2	Class IB
At or above 73.4°F (23°C) but below 100°F (37.8°C)	Category 3	Class IC
At or above 100°F (37.8°C) and at or below 140°F (60°C)		Class II (“Combustible Liquid”)
Above 140°F (60°C) and at or below 199.4°F (93°C)	Category 4	Class III (“Combustible Liquid”)
Above 199.4°F (93°C)	Not regulated by 1910.106, UNLESS a liquid with a FP greater than 199.4°F is heated within 30°F of its FP, it then must be handled as a Category 4 flammable liquid.	Class IIIB (was not regulated by 1910.106)



List of Chemicals

Chemical(s)	Chemical(s)	Chemical(s)
α,-dichloromethyl methyl ether	(-)-beta-pinene	(-)-citronellal
(-)-linalool	(-)-menthyl chloride	(+)-(s)-hex-1-en-5-ol
(+)-diethyl l-tartrate	(1,3-dioxolan-2-ylmethyl)magnesium bromide	(1-ethoxycyclopropoxy)trimethylsilane
(1r)-(-)-myrtenal	(1r)-2,6,6-trimethylbicyclo[3.1.1]hept-2-ene	(2,3-epoxypropyl)benzene
(2-methyl-propenyl)trimethylsilane	(benzotriazol-1-yloxy)tris(dimethylamino)phosphonium hexafluorophosphate	(diethylamino)sulfur trifluoride
(propargyloxy)trimethylsilane	(r)-(+)-1-phenylethanol	(r)-(+)-1-phenylethylamine
(r)-(+)-3-(dimethylamino)pyrrolidine	(r)-epichlorohydrin	(r)-styrene oxide
(s)-(-)-1-amino-2-(methoxymethyl)-pyrrolidine	(s)-(-)-2-methyl-1-butanol	(s)-(-)-3-(dimethylamino)pyrrolidine
(S)-(?)-?-Methylbenzylamine	(s)-(+)-1-(2-pyrrolidinylmethyl)-pyrrolidine	(s)-(+)-4-penten-2-ol
(tert-butyl)dimethylsilyloxy)acetaldehyde	(triethylsilyl)acetylene	(triisopropylsilyl)acetylene
(trimethylphosphoranylidene)acetonitrile	(trimethylsilyl)acetonitrile	(trimethylsilyl)methyl lithium
?,?,?-trifluorotoluene	?-angelica lactone	?-cumene hydroperoxide
?-methylcrotonaldehyde	?-methylene butyrolactone	?-methylstyrene
?-methyl-trans-cinnamaldehyde	[(1,1-dimethyl-2-propynyl)oxy]trimethylsilane, 10 mL bb	1-(2-aminoethyl)pyrrolidine
1-(3-aminopropyl)-2-pipecoline	1-(trimethylsilyl)-1-propyne	1-(trimethylsilyl)imidazole
1,1,3,3-tetramethylbutyl isocyanide	1,1,3,3-tetramethyldisilazane	1,1-dimethoxyethane
1,1-dimethylhydrazine	1,2,4,5-tetramethylbenzene	1,2,4-trifluoro-5-nitrobenzene
1,2-bis(trimethylsiloxy)cyclobutene	1,2-bis(trimethylsiloxy)ethane	1,2-dibromobenzene
1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichlorotetramethyldisilane
1,2-dihydronaphthalene	1,2-dimethoxybenzene	1,2-dimethoxyethane
1,2-epoxy-5-hexene	1,2-epoxypentane	1,2-ethanedithiobis(trimethylsilane)
1,2-ethanedithiol	1,3,5-cycloheptatriene	1,3,5-trioxane
1,3-benzodioxole	1,3-butadiene, gas	1,3-cyclohexadiene
1,3-dibromopropane	1,3-dichloro-1,1,3,3-tetramethyldisiloxane	1,3-dichloro-2-butene
1,3-difluorobenzene	1,3-dimethoxybenzene	1,3-dioxol-2-one
1,3-dioxolane	1,3-propanediamine	1,3-propanedithiol
1,4-butanediamine	1,4-cyclohexadiene	1,4-dioxo-8-azaspiro[4.5]decane



Flammable Liquids and Solids
Chemical Class Standard Operating Procedure
Berkeley **EH&S**

1,4-pentadien-3-ol	1,5-cyclooctadiene	1,5-diaminopentane
1,6-heptadien-4-ol	1,6-heptadiyne	1,7-octadiene
1,7-octadiyne	1-[(trimethylsilyl)ethynyl]-4-(trifluoromethyl)benzene	1-acetyl-1-cyclohexene
1-acetyl-1-cyclopentene	1-aminohomopiperidine	1-benzyl-4-piperidone
1-bromo-2,2-dimethoxypropane	1-bromo-2-butyne	1-bromo-2-chlorobenzene
1-bromo-2-fluorobenzene	1-bromo-2-methoxyethane	1-bromo-2-methylpropene
1-bromo-3,5-dimethylbenzene	1-bromo-3-chloropropane	1-bromo-3-methyl-2-butene
1-bromo-4-ethylbenzene	1-bromobutane	1-bromohexane
1-bromooctane	1-bromopinacolone	1-butanamine
1-butanefsulfonyl chloride	1-butanol	1-buten-4-ol
1-butyne	1-chloro-2-methylpropane	1-chloro-3,3-dimethylbutane
1-chloro-3-fluorobenzene	1-chloro-n,n,2-trimethyl-1-propenylamine	1-cyanovinyl acetate
1-cyclohexene-1-acetonitrile	1-cyclohexene-1-carboxaldehyde	1-decanamine
1-decyne	1-dimethylamino-2-propyne	1-dodecene
1-ethynyl-1-cyclohexene	1-fluoro-3-(trifluoromethyl)benzene	1-fluoro-3-nitrobenzene
1-fluoro-4-nitrobenzene	1-heptanamine	1-heptyne
1-hexanethiol	1-hexanol	1-hexyne
1-hydroxybenzotriazole hydrate	1-iodo-2-methylpropane	1-iodo-3-nitrobenzene
1-iodoheptane	1-iodohexane	1-iodopentane
1-iodopropane	1-Isopropyl-4-methyl-1,4-cyclohexadiene	1-methoxy-1,4-cyclohexadiene
1-methoxy-3-trimethylsiloxy-1,3-butadiene	1-methyl-2-propenylmagnesium chloride	1-methyl-2-pyrrolidinone
1-methyl-4-piperidone	1-methylpyrrolidine	1-octanol
1-pentene	1-pentyne	1-phenyl-1,2-propanedione
1-phenylethanol	1-phenylhexane	1-propanol
1-propenylmagnesium bromide, 0.05 mol/l in THF	1-propynylmagnesium bromide, 0.05 mol/l in THF	2-(2-aminoethyl)-1-methylpyrrolidine
2-(2-chloroethoxy)ethanol	2-(bromovinyl)trimethylsilane	2-(dimethylamino)pyridine
2-(trifluoromethyl)benzyl chloride	2-(trifluoromethyl)benzylamine	2-(trimethylsilyl)ethanesulfonyl chloride
2-(trimethylsilyl)ethanethiol	2-(trimethylsilyl)ethanol	2-(Trimethylsilyl)ethoxymethyl chloride
2,2,2-trifluoroacetophenone	2,2,2-trifluoroethanesulfonyl chloride	2,2,2-trifluoroethanethiol
2,2,2-trifluoroethanol	2,2,2-trifluoroethylamine	2,2,4-trimethylpentane
2,2,6,6-tetramethyl-3,5-heptanedione	2,2,6,6-tetramethylpiperidine	2,2,6,6-tetramethylpiperidinylmagnesium chloride lithium chloride complex



Flammable Liquids and Solids
 Chemical Class Standard Operating Procedure
 Berkeley **EH&S**

2,2,6-trimethyl-4h-1,3-dioxin-4-one	2,2-dimethoxypropane	2,2-dimethyl-4-pental
2,2-dimethylcyclopentanone	2,3,3-trimethylindolenine	2,3,4,5,6-pentafluorostyrene
2,3,4-trifluorobenzaldehyde	2,3,5,6-tetrafluoro-4-aminobenzotrifluoride	2,3,5-collidine
2,3-butanediol	2,3-butanedione	2,3-cycloheptenopyridine
2,3-cyclopentanopyridine	2,3-dibromopropene	2,3-dichloro-1-propene
2,3-dihydro-4h-pyran	2,3-dimethyl-2-butene	2,4,6-collidine
2,4-difluoroaniline	2,4-difluoronitrobenzene	2,4-dimethylthiophenol
2,4-dinitrophenylhydrazine	2,4-hexadienal	2,4-lutidine
2,5-dihydro-2,5-dimethoxyfuran	2,5-dihydrofuran	2,5-dimethoxytetrahydrofuran
2,5-dimethyl-2,4-hexadiene	2,5-dimethylpyrrole	2,5-dimethyltetrahydrofuran
2,5-hexanedione	2,5-norbornadiene	2,6-dichlorotoluene
2,6-difluorobenzoyl chloride	2,6-dimethoxypyridine	2,6-dimethyl-5-heptenal
2,6-dimethylaniline	2,6-dimethylcyclohexanone	2,6-dimethylpiperidine
2,6-di-t-butylpyridine	2,6-di-tert-butylpyridine	2,6-lutidine
2-acetyl-1-methylpyrrole	2-acetylcyclohexanone	2-acetylpyridine
2-allylphenol	2-amino-1-propanol	2-bromo-1,1-dimethoxyethane
2-bromo-1,3,2-benzodioxaborole	2-bromo-2-methylpropane	2-bromo-3-methyl-2-butene
2-bromopropene	2-bromothiophene	2-butanol
2-butanone	2-buten-1-ol	2-butenal
2-butenal, 2-methyl-, (e)-	2-butyne-1-ol	2-chloro-1,3-butadiene
2-Chloro-2-methylpropane	2-chloro-2-propen-1-ol	2-chloro-5,5-dimethyl-1,3,2-dioxaphosphorinane
2-chloro-6-methylpyridine	2-chloroacrylonitrile	2-chlorobenzyl chloride
2-chloroethanol	2-chloropyridine	2-chlorothiophenol
2-cyanoethylzinc bromide	2-cyclohepten-1-one	2-cyclohexen-1-ol
2-cyclohexen-1-one	2-cyclopenten-1-one	2-dimethylamino-2-methylpropanol
2-dimethylaminoethylamine	2-ethylacrolein	2-ethylaniline
2-ethylbutyraldehyde	2-ethylpyridine	2-ethynylanisole
2-fluoroaniline	2-fluorobenzyl isocyanate	2-fluorophenol
2-fluoropyridine	2-fluorostyrene	2-furanmethanol
2-hexen-1-ol (E)	2-hexen-1-ol (Z)	2-hydroxy-3-methylbenzaldehyde
2-hydroxyethylhydrazine	2-iodoethanol	2-iodopropane
2-isocyanatopropane	2-isopropoxyethanol	2-isopropyl-5-methylhex-2-enal
2-mercaptoethanol	2-mercaptoethyl ether	2-methoxy-4,4,5,5-tetramethyl-1,3,2-dioxaborolane
2-methoxybenzoyl chloride	2-methoxycarbonylcyclohexanone	2-methoxycyclohexanone
2-methoxyethanol	2-methoxyethyl chloroformate	2-methoxyfuran
2-methoxyphenylmagnesium bromide	2-methoxypropene	2-methoxypyridine
2-methoxythiophene	2-methyl-1-buten-3-yne	2-methyl-1-cyclohexanol



Flammable Liquids and Solids
 Chemical Class Standard Operating Procedure
 Berkeley **EH&S**

2-methyl-1-cyclohexanone	2-methyl-2-butene	2-methyl-2-cyclopenten-1-one
2-methyl-2-pentenal	2-methyl-2-vinyl oxirane	2-methyl-3-buten-1-ol
2-methyl-3-buten-2-ol	2-methyl-3-butyne-2-ol	2-methylaminoethanol
2-methylbenzyl chloride	2-methylbutyraldehyde	2-methylcyclohexylamine
2-methylcyclopentanone	2-methylfuran	2-methylpiperidine
2-methylquinoline	2-methyltetrahydrofuran	2-nitropropane
2-nonanone	2-norbornanone	2-norbornene
2-octyne	2-penten-1-ol, (z)-	2-pentylpyridine
2-phenethylamine	2-picoline	2-propanamine
2-propen-1-amine	2-propen-1-ol	2-propenenitrile
2-propenoic acid	2-propenoyl chloride	2-propenyl phenol
2-propynylcyclohexane	2-pyridinecarboxaldehyde	2-tetrahydrofurfurylamine
2-thiophenecarbonyl chloride	2-thiophenecarboxaldehyde	2-tolylmagnesium bromide
2-vinylpyridine	3-(diethoxymethyl)benzaldehyde	3-(methylthio)propionaldehyde
3,3,3-trifluoropropionic acid	3,3-diethoxy-1-propyne	3,3-dimethyl-1-butene
3,3-dimethylbutan-1-ol	3,3-dimethylbutyryl chloride	3,4-difluorobenzoyl chloride
3,4-difluorophenylacetylene	3,4-epoxy-1-butene	3,4-hexanedione
3,5-bis(trifluoromethyl)benzotrile	3,5-bis(trifluoromethyl)phenyl isocyanate	3,5-bis(trifluoromethyl)thiophenol
3,5-difluorobenzaldehyde	3,5-dimethyl-2-cyclohexen-1-one	3-aminopropyldiethoxymethylsilane
3-bromo-1-(trimethylsilyl)-1-propyne	3-bromo-2-methyl-1-propene	3-bromo-4-methylpyridine
3-bromofuran	3-bromopropionyl chloride	3-bromopyridine
3-bromotoluene	3-buten-1-ol, 3-methyl-	3-buten-2-ol
3-butenal diethyl acetal	3-butenic acid	3-butyne-1-ol
3-butyne-2-ol	3-butyne-2-one	3-chloro-1-propanol
3-chloro-2-butanone	3-chloro-2-chloromethyl-1-propene	3-chloro-2-methyl-1-propene
3-chloro-3-methyl-1-butyne	3-chlorobenzaldehyde	3-chlorobenzenethiol
3-chloropropionyl chloride	3-dimethylamino-1-propyne	3-dimethylaminopropylamine
3-ethylpyridine	3-ethynylaniline	3-fluoro-5-(trifluoromethyl)benzaldehyde
3-fluoroaniline	3-fluorobenzaldehyde	3-fluorophenol
3-furaldehyde	3-hexyne	3-hydroxy-2-butanone
3-hydroxy-3-methyl-2-butanone	3-hydroxytetrahydrofuran	3-methoxybenzoyl chloride
3-methoxybenzylzinc chloride	3-methoxyphenylmagnesium bromide	3-methoxyphenylmagnesium bromide, 0.1 mol/l in THF
3-methoxypropylamine	3-methyl-1,3-pentadiene	3-methyl-1-butanol
3-methyl-1-butene	3-methyl-1-butyne	3-methyl-1-penten-4-yn-3-ol
3-methyl-2,4-pentanedione	3-methyl-2-butanol	3-methyl-2-butanone
3-methyl-2-buten-1-ol	3-methyl-2-butenal	3-methyl-2-cyclohexen-1-one
3-methyl-2-cyclopenten-1-one	3-methylanisole	3-methylbenzyl chloride



Flammable Liquids and Solids
 Chemical Class Standard Operating Procedure
 Berkeley **EH&S**

3-methylcyclohexanone	3-methylpiperidine	3-methylpyridine
3-pentyn-1-ol	3-pentyn-2-ol	3-pyridinecarboxaldehyde
3-thiopheneethanol	3-trifluoromethylbenzyl bromide	3-trimethylsilyl-2-propyn-1-ol
4-(3-hydroxypropyl)morpholine	4-(trifluoromethoxy)benzoylchloride	4-(trifluoromethyl)benzylamine
4-(trifluoromethyl)-phenol	4-(trimethylsilyl)-3-butyn-2-one	4,4,5,5-tetramethyl-1,3,2-dioxaborolane
4,4-dimethoxy-2-butanone	4,4-dimethyl-2-cyclohexen-1-one	4?-fluoroacetophenone
4?-methoxypropiophenone	4?-methylacetophenone	4-acetoxystyrene
4-bromo-1-butanol	4-bromo-1-butene	4-bromo-o-xylene
4-bromostyrene	4-chloro-1-butanol	4-chloro-2-fluorophenol
4-chlorobutyronitrile	4-chlorobutyl chloride	4-chloro-n-methylaniline
4-ethoxy-1,1,1-trifluoro-3-buten-2-one	4-ethylaniline	4-ethylbenzaldehyde
4-ethylphenyl isocyanate	4-fluorobenzaldehyde	4-fluorophenylacetylene
4-fluorostyrene	4-fluorothiophenol	4-hydroxy-2-butanone
4-isopropylaniline	4-methoxybenzoyl chloride	4-methylcyclohexanone
4-methylpiperidine	4-methylstyrene	4-Octene, (E)-
4-octyne	4-penten-1-ol	4-penten-2-ol
4-pentenoic acid	4-pentenoyl chloride	4-pentyn-1-ol
4-pentyn-2-ol	4-picoline	4-pyridinecarboxaldehyde
4-vinylanisole	5,5-dimethoxy-1,2,3,4-tetrachlorocyclopentadiene	5-bromo-2-methyl-2-pentene
5-bromopentan-1-ol	5-chloro-1-pentyne	5-chloro-2-pentanone
5-cyano-1-pentyne	5-decyne	5-hexen-1-ol
5-hexenenitrile	5-hexyn-1-ol	5-hydroxy-2-pentanone
5-methylfurfural	5-nitrofurfural	5-nonanone
6-methyl-5-hepten-2-one	9-bbn triflate	acetaldehyde
acetaldoxime	acetic acid	acetic anhydride
acetone cyanohydrin	Acetonitrile	acetoxyacetyl chloride
acetyl chloride	acetylacetone	acryloyl chloride
allyl acetate	allyl bromide	allyl chloroformate
allyl ether	allyl iodide	allyl methyl carbonate
allylmagnesium bromide	allyloxytrimethylsilane	allyltrimethylsilane
alpha-methylcinnamaldehyde	alpha-pinene	alpha-pinene oxide
aluminium isopropoxide	aminoacetaldehyde diethyl acetal	aminoacetaldehyde dimethyl acetal
ammonia	ammonia, 0.05 mol/l in dioxane	ammonia, 0.2 mol/l in EtOH
ammonia, 0.2 mol/l in MeOH	ammonia, 0.7 mol/l in MeOH	ammonium sulfide
amylamine	aniline	azidotrimethylsilane
benzaldehyde	benzaldehyde dimethyl acetal	benzaldehyde, 4-(trifluoromethyl)-
benzene	benzene, 1-methoxy-4-methyl-	benzenemethanethiol



Flammable Liquids and Solids
 Chemical Class Standard Operating Procedure
 Berkeley EH&S

benzenemethanol, α-methyl-, (s)-	benzenethiol	benzofuran
benzoyl chloride	benzyl bromide	benzyl chloride
benzyl isocyanate	benzylamine	benzyltrimethylsilane
benzylidene-bis(tricyclohexylphosphine)dichloro ruthenium	benzylmagnesium chloride	benzyltrimethylammonium hydroxide
benzylzinc bromide	bicyclo[4.4.0]decane	bis(2-(dimethylamino)ethyl) ether
bis(2-methoxyethyl)amine	bis(chloromethyl)dimethylsilane	bis(dimethylsilyl) ether
bis(trimethylsilyl)acetamide	bis(trimethylsilyl)trifluoroacetamide	bis[bis(trimethylsilyl)amino]tin(ii)
borane dimethylamine complex	borane dimethylsulfide complex	borane n,n-diisopropylethylamine complex
borane tetrahydrofuran complex	boron tribromide	boron trifluoride etherate
bromoacetaldehyde diethyl acetal	bromobenzene	bromocyclohexane
bromocyclopropane	bromomethyl acetate	bromomethyldimethylchlorosilane
bromopentafluorobenzene	bromotrimethylsilane	butanoic acid
butyl butyrate	butyl isocyanate	butyric anhydride
carbon	carbon disulfide	carbon monoxide
catecholborane	chloroacetaldehyde	chloroacetaldehyde diethyl acetal
chloroacetic acid allyl ester	chloroacetone	Chlorobenzene
chlorodicyclohexylborane	chlorodiethylisopropylsilane	chlorodiisopropylphosphine
chlorodimethylphenylsilane	chlorodimethylsilane	chloromethyl cyanide
chloromethyl methyl ether	chloromethylmethyl sulfide	chloromethyltrimethylsilane
chloropyrazine	chlorotriethylsilane	chlorotrimethylsilane
cinnamyl chloride	cis-1,4-dichloro-2-butene	copper(i) trifluoromethanesulfonate benzene complex
crotonaldehyde, predominantly trans	crotononitrile	crotonoyl chloride
crotyl bromide	cumene	cycloheptanone
cycloheptene	cyclohexane	cyclohexanecarboxaldehyde
cyclohexanol	cyclohexanone	cyclohexanone dimethyl ketal
cyclohexene	cyclohexene oxide	cyclohexyl isocyanate
cyclohexyl methyl ketone	cyclohexylacetylene	cyclohexylamine
cyclopentanamine	cyclopentanecarboxylic acid, 2-oxo-, methyl ester	cyclopentanone
cyclopentene	cyclopentene oxide	cyclopentyl isocyanate
cyclopropionic acid	cyclopropyl carbinol	cyclopropyl methyl ketone
cyclopropylacetylene	cyclopropylamine	decaborane(14)
diallyl carbonate	diallyl n,n-diisopropylphosphoramidite	diallylamine
DIBAL-H	DIBAL-H, 25% in toluene	dibenzyl n,n-diisopropylphosphoramidite



Flammable Liquids and Solids
 Chemical Class Standard Operating Procedure
 Berkeley EH&S

dibutylamine	dibutylboryl trifluoromethanesulfonate	dichloro(diethylamino)phosphine
dichloro[1,3-bis(2-methylphenyl)-2-imidazolidinylidene](benzylidene)(tri cyclohexylphosphine)ruthenium(ii)	dichlorodiisopropylsilane	dichlorodimethylsilane
dichloromethylphenylsilane	dicyclopentadiene	diethyl allylmalonate
diethyl carbonate	diethyl chlorophosphate	diethyl cyanophosphonate
diethyl malonate	diethyl methanephosphonate	diethyl methylmalonate
diethyl oxalate	diethyl phosphite	diethyl pyrocarbonate
diethyl succinate	diethylaluminum chloride	diethylaluminum cyanide
diethylamine	diethylaminotrimethylenamine	diethylmethoxyborane
Diethylsilane	difluoroacetic acid	Diglyme
diisobutylaluminium hydride, 0.1 mol/l in Toluene	diisobutylaluminum chloride	diisopropyl ether
diisopropylamine	diisopropylcarbodiimide	diisopropylethylamine
diisopropylphosphoramidous dichloride	diketene	dimethoxymethane
dimethyl acetylenedicarboxylate	dimethyl carbonate	dimethyl dicarbonate
dimethyl disulfide	dimethyl ether	dimethyl malonate
dimethyl methylmalonate	dimethyl methylphosphonate	dimethyl phosphite
dimethyl sulfate	dimethyl sulfide	dimethyl sulfoxide
dimethylaluminum chloride	dimethylamine	dimethylammonium dimethylcarbamate
dimethylboron bromide	dimethylcarbonyl chloride	dimethyldichlorosilane
dimethylglyoxime	dimethylphenylsilane	dimethylthexylsilyl chloride
dimethylzinc	di-sec-butylamine	di-t-butyl-dichlorosilane
di-tert-butyl dicarbonate	di-tert-butyl malonate	di-tert-butylsilyl bis(trifluoromethanesulfonate)
dl-alpha-methylbenzylamine	epibromohydrin	epichlorohydrin
ethanol	ethanolamine	ethyl (l)-(-)-lactate
Ethyl 2,3-butadienoate	ethyl 2,3-epoxypropionate	ethyl 2-bromobutyrate
ethyl 2-bromoisobutyrate	ethyl 2-bromopropionate	ethyl 2-butyrate
ethyl 2-chloroacetoacetate	ethyl 2-ethylacetoacetate	ethyl 2-methylacetoacetate
ethyl 3,3-diethoxypropionate	ethyl 3-bromopropionate	ethyl 3-chloro-3-oxopropionate
ethyl 3-chloropropionate	ethyl 3-methylcrotonate	ethyl 4,4,4-trifluorocrotonate
ethyl 4-bromobutyrate	ethyl 6-bromohexanoate	ethyl acetate
ethyl acetoacetate	ethyl acrylate	ethyl bromoacetate
ethyl butanoate	ethyl chloroacetate	ethyl chloroformate
ethyl chlorooxoacetate	ethyl cyanoformate	ethyl cyclopentanone-2-carboxylate
ethyl formate	ethyl glycolate	ethyl iodoacetate
ethyl isobutyrate	ethyl isocynoacetate	ethyl orthoacetate



Flammable Liquids and Solids
Chemical Class Standard Operating Procedure
Berkeley **EH&S**

ethyl orthoformate	ethyl orthopropionate	ethyl piperidine-4-carboxylate
ethyl propanoate	ethyl propiolate	ethyl tiglate
ethyl trichloroacetate	ethyl trifluoroacetate	ethyl vinyl ether
ethyl-2-isocyanatoacetate	ethylamine	ethylbenzene
ethyldimethylsilane	ETHYLENE	ethylene sulfide
ethylenediamine	ethylisopropylamine	ethylmagnesium bromide
ethylmagnesium bromide, 0 in THF	ethylmethylamine	ethylvinyl sulfide
ethynylmagnesium bromide	ethynyltributylstannane	ethynyltrimethylsilane
ferrocene	fluorobenzene	fluoroboric acid dimethyl ether complex
formaldehyde	formaldehyde, 37% in water	formic acid
fumaryl chloride	furan	furfural
furfurylamine	geranyl bromide	grubbs catalyst 2nd generation
heptanal	hexafluorobenzene	hexamethyldisilane
hexamethyldisilazane	hexamethyldisilthiane	hexamethylditin
hexamethylenetetramine	hexamethylphosphorous triamide	hydrazine, anhydrous
hydrogen	hydroxyacetone	indene
indoline	iodobenzene	iodocyclohexane
iodotrimethylsilane	iridium	iron pentacarbonyl
isoamyl nitrite	isoamylamine	isobutyl alcohol
isobutyl chloroformate	isobutyl nitrite	isobutylamine
isobutylene	isobutylene epoxide	isobutylmagnesium chloride
isobutyraldehyde	isobutyric acid	isobutyronitrile
isopropenyl acetate	isopropenyl carbinol	isopropoxyboronic acid pinacol ester
isopropyl 2-cyanoacetate	isopropyl acetate	isopropyl alcohol
isopropyl bromide	isopropyl chloride	isopropyl chloroformate
isopropyl isocyanate	isopropylmagnesium chloride	isovaleraldehyde
isoxazole	l-fenchone	linalool
lithium 2-thienylcyanocuprate	lithium bis(trimethylsilyl)amide, 0.1 mol/l in THF	lithium diphenylphosphide
l-menthone	l-menthyl chloroformate	l-selectride
l-selectride, 1M in THF	l-verbenone	magnesium
magnesium bromide diethyl etherate	magnesium methyl carbonate	m-cresol
mesityl oxide	mesitylene	methacrylic acid
methanol	methanol-d	methoxyacetyl chloride
methoxycarbonylsulfonyl chloride	methyl (r)-(-)-3-hydroxy-2-methyl-propionate	methyl (s)-(-)-lactate
methyl 1-cyclopentene-1-carboxylate	methyl 2-(bromomethyl)acrylate	methyl 2-hydroxyisobutyrate
methyl 2-oxocyclohexanecarboxylate	methyl 3,3-dimethoxypropionate	methyl 3-bromopropionate



Flammable Liquids and Solids
Chemical Class Standard Operating Procedure
Berkeley **EH&S**

methyl 3-chloro-3-oxopropionate	methyl 3-oxovalerate	methyl 4-bromocrotonate
methyl 4-chloro-4-oxobutyrate	methyl 5-chloropentanoate	methyl acetoacetate
methyl acetylenecarboxylate	methyl acrylate	methyl benzoate
methyl bromoacetate	methyl chloroacetate	methyl chloroformate
methyl crotonate	methyl cyanoformate	methyl dichloroacetate
methyl formate	methyl isobutyl ketone	methyl isobutyrate
methyl isonipecotate	methyl l-(+)-β-hydroxyisobutyrate	methyl methoxyacetate
methyl orthoacetate	methyl orthobenzoate	methyl orthoformate
methyl phenylacetate	methyl pivalate	methyl propionate
methyl pyruvate	methyl thioglycolate	methyl trans-3-methoxyacrylate
methyl trifluoromethanesulfonate	methyl trimethylsilylacetate	methyl vinyl ketone
methylaluminum dichloride	methylamine	methylglyoxal dimethyl acetal
methyl lithium	methylmagnesium bromide	methylmagnesium chloride, 0.3 mol/l in THF
methyltrimethoxysilane	m-methylbenzoyl chloride	morpholine
m-tolualdehyde	m-toluenethiol	m-toluidine
n-β-hydroxyethylpyrrolidine	n,n,n'-trimethylethylenediamine	n,n-diethyl-1,1-dimethylsilylamine
n,n-diethyl-1,5-dihydro-2,4,3-benzodioxaphosphepine	n,n-diethylaniline	n,n-diethylaniline borane complex
n,n-diethylethylenediamine	n,n-diethylformamide	n,n'-dimethyl-1,2-ethanediamine
n,n-dimethylacetamide	n,n-dimethylacetamide dimethyl acetal	n,n-dimethylaminoethanol
n,n-dimethylaniline	n,n-dimethylformamide	n,n-dimethylformamide dimethyl acetal
N,N-Dimethylformamide dineopentyl acetal	n,n-dimethylpropanamide	n-aminomorpholine
naphthalene	n-benzyltrimethylsilylamine	n-boc-piperidine
n-butyl cyanoacetate	n-butyl vinyl ether	n-butyllithium
n-butyryl chloride	neopentyl alcohol	neopentyl iodide
n-ethylbenzylamine	n-ethylmorpholine	n-hexane
nickel	nickel(ii) bromide ethylene glycol dimethyl ether complex	nickel, bis[(1,2,5,6-η)-1,5-cyclooctadiene]-
n-isopropylbenzylamine	n-isopropylcyclohexylamine	nitrobenzene
nitromethane	n-methoxy-n-methylacetamide	n-methylaniline
n-methylbenzylamine	n-methyldiaminoethane	n-methylimidazole
n-methylmorpholine	n-methylpiperazine	n-methylpiperidine
n-methylpyrrole	n-nitroso-n-methylurea	nonane
n-vinylimidazole	o-(7-azabenzotriazol-1-yl)-n,n,n',n'-tetramethyluronium hexafluorophosphate	o-allyl 2,2,2-trichloroacetimidate
o-bromophenol	o-bromopyridine	o-bromotoluene



Flammable Liquids and Solids
 Chemical Class Standard Operating Procedure
 Berkeley **EH&S**

o-chlorophenol	o-chlorotoluene	octadecylmagnesium chloride
octane	octanoyl chloride	o-mercaptotoluene
o-tert-butylhydroxylamine hydrochloride	o-tolualdehyde	o-toluidine
o-tolunitrile	o-toluoyl chloride	palladium
palladium, on activated charcoal, 10% basis	p-aminobenzotrifluoride	paraformaldehyde
p-chlorobenzylamine	pentafluorophenyl chlorothionoformate	pentafluorophenyl trifluoroacetate
pentanal	pentylmagnesium bromide, 0.2 mol/l in Et ₂ O	peracetic acid
p-fluoroaniline	phenetole	phenoxy-2-propanone
phenyl chloroformate	phenyl chlorothionocarbonate	phenyl isocyanate
phenyl trifluoromethanesulfonate	phenylacetaldehyde dimethyl acetal	phenylacetylene
phenylboron dichloride	phenylhydrazine	phenyllithium, 0.18 mol/l in nBu ₂ O
phenyllithium, 1.8% in Bu ₂ O	phenylmagnesium chloride	phenylmagnesium chloride, 0.2 mol/l in THF
phenylsilane	phenylthioethylene	phenyltrimethyltin
phosphorus	phosphorus pentasulfide	pivalaldehyde
pivalyl chloride	platinum(0)-1,3-divinyl-1,1,3,3-tetramethyldisiloxane	potassium ethyl xanthogenate
potassium tert-butoxide	propanal	propanal, 2-methyl-
propanenitrile	propanoic acid	propanoic anhydride
propanoyl chloride	propargyl 2-tetrahydropyranyl ether	propargyl alcohol
propargyl bromide	propargylamine	propionic acid
propylamine	propylene oxide	propyne
p-tolualdehyde	p-toluoyl chloride	pulegone
p-xylene	pyrazine	pyridine
pyridinium dichromate	pyrrole	pyrrolidine
pyruvic acid, Type: pure State: liquid	salicylaldehyde	samarium
sec-butyllithium	sec-butyllithium, 1.3 M in hexanes	sodium bis(2-methoxyethoxy)aluminiumhydride
sodium cyanoborohydride	sodium dodecyl sulfate	sodium hydride
sodium tert-butoxide	sodium triacetoxylborohydride	stannane, tributylethenyl-
styrene	styrene oxide	succinyl chloride
t-butyl nitrite	tebbe reagent	tert-butanethiol
tert-butyl 1-pyrrolidine	tert-butyl acetate	tert-butyl acrylate
tert-butyl alcohol	tert-butyl bromoacetate	tert-butyl ethyl malonate
tert-butyl hydroperoxide	tert-butyl hydroperoxide (5.0-6.0M in decane)	tert-butyl methyl ether, anhydrous (SureSeal)
tert-butyl methyl ketone	tert-butyl vinyl ether	tert-butylacetic acid



Flammable Liquids and Solids
 Chemical Class Standard Operating Procedure
 Berkeley **EH&S**

tert-butylamine	tert-butylchlorodimethylsilane	tert-butyldimethylsilyl trifluoromethanesulfonate
tert-butyllithium	tert-butyllithium, 0.155 mol/l in pentane	tetraethoxymethane
tetrahydrofurfuryl alcohol	tetrahydropyran	tetrahydrothiophene
tetrakis(dimethylamino)ethylene	tetrakis(triphenylphosphine)nickel	tetralin
tetramethyl orthocarbonate	tetramethyl-1,3-diaminopropane	tetramethylguanidine
tetramethylsilane	tetravinylstannane	thiazole
thioacetic acid	thioanisole	thiomorpholine
thiophene	thyl 4-chloro-4-oxobutyrate	titanium tetrakis(dimethylammonium)
titanium(iv) chloride tetrahydrofuran complex	titanium(iv) isopropoxide	TMEDA
toluene	tosyl azide	trans-1,2-dichloroethylene
trans-2-butenic acid ethyl ester	trans-2-hexen-1-al	trans-2-methyl-2-butenal
trans-3-(tert-butyldimethylsilyloxy)-n,n-dimethyl-1,3-butadien-1-amine	trans-4-methoxy-3-buten-2-one	trans-cinnamaldehyde
triacetoxylvinylsilane	tributyl borate	tributylamine
tributylphosphine	tributyltin hydride	tributylvinyl stannane
trichloroacetyl isocyanate	trichlorosilane	triethoxysilane
triethyl 2-phosphonopropionate	triethyl phosphite	triethylamine
triethylborane	triethylenediamine	triethyloxonium hexafluorophosphate
triethylsilyl trifluoromethanesulfonate	triethylvinylsilane	trifluoroacetic acid 2,2,2-trifluoromethyl ester
trifluoroacetylacetone	trifluoromethyltrimethylsilane	triisopropyl borate
triisopropyl orthoformate	triisopropyl phosphite	triisopropylsilane
triisopropylsilyl chloride	trimethoxyvinylsilane	trimethyl borate
trimethyl orthobutyrate	trimethyl orthopropionate	trimethyl phosphite
trimethyl(vinyloxy)silane	trimethyl-2-propynylsilane	trimethylboroxine
trimethylene oxide	trimethylphosphine	trimethylsilanol
trimethylsilyl cyanide	trimethylsilyl isothiocyanate	trimethylsilyl polyphosphate
trimethylsilyl trifluoromethanesulfonate	trimethylsilylacetylene	trimethylsilyldiazomethane
tripropargylamine	tris(trimethylsilyl)silane	tri-sec-butylborane
vinyl acetate	vinylboronic acid pinacol ester	vinylcyclohexane
vinylmagnesium bromide	xylene	zinc-copper couple
zirconium(iv) tert-butoxide		



Flammable Liquids and Solids
Chemical Class Standard Operating Procedure
Berkeley **EH&S**

--	--	--