Principal Investigator: _____ ***Date Approved:*** _____

This document covers basic chemical safety information for pyrophorics. The use of any pyrophoric chemical is subject to pre-approval by the Principal Investigator (PI) and/or Supervisor. PI and/or Supervisor may use the sheet attached to this SOP to document any lab specific training for Pyrophorics and Self-Heating Chemicals. DO NOT USE PYROPHORICS UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.

Pyrophoric and Self-Heating Chemicals

A pyrophoric material is defined by the National Fire Protection Agency (NFPA) as having an autoignition temperature below 130°F (55°C). A self-heating material is one which reacts with air, in the absence of external energy, to produce heat. Self-heating materials may ignite if stored in large quantities. These materials typically also react violently with water. Because of this, pyrophoric and self-heating materials must always be handled under inert atmosphere.

Personal Protective Equipment & Personnel Monitoring		
 **Lab Coat**	 **Gloves**	 **Eye Protection**
Flame resistant lab coat.	Nitrile or neoprene gloves.	ANSI Z87.1-compliant safety glasses or safety goggles if a splash hazard is present.

Labeling & Storage

Store pyrophoric and self-heating materials in a flammable storage cabinet with self-closing hinges or in a refrigerator rated for flammable storage. All pyrophoric and self-heating materials must be stored away from combustible materials, oxidizing acids, oxidizers, and aqueous solutions. Primary containers should be labeled according to the UNC Charlotte Chemical Hygiene Plan. The secondary container's label must contain the chemical name and corresponding hazards. 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

Glove Box

Whenever possible, pyrophorics should be handled inside of a glove box.

Fume Hood

A Schlenk line inside of a fume hood may be used to provide an inert atmosphere for working with pyrophorics.

Housekeeping

Spills

If pyrophoric materials spill in a glove box, quench the spilled material slowly with isopropanol. Absorb with a non-combustible absorbent, and dispose as hazardous solid waste.

If pyrophoric materials spill outside of a glove box, a Class D fire extinguisher may be used to extinguish a small fire. If you do not feel comfortable using a fire extinguisher, Call 911 from any campus phone (or 704-687-2200 from a cell phone). Report any exposure to EHS at 704-687-1111. Remain on-site (at a safe distance) to provide detailed information to first responders.

Quenching

Do not return unused pyrophoric materials to their original container. Unused pyrophoric materials must be quenched under inert atmosphere with adequate cooling by slowly adding first isopropanol, then methanol, then water.

Waste

Refer to the UNC Charlotte Chemical Hygiene Plan for details.

First Aid & Emergencies

Fire

DO NOT use water to put out fire, instead use a Class D fire extinguisher if safe to do so.

Skin or Eye Contact

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

Name	Signature	Date