

Standard Operating Procedure

Pyrophoric Chemicals

Hazard Description: Pyrophoric liquids and solids are defined as such when they are liable to ignite within five minutes after coming into contact with air, even when in small quantities. Pyrophoric gases will ignite spontaneously in air at or below 130° F.

Labeling: Pyrophoric liquids and solids are classified as a Category 1 flammable (pyrophoric gases are classified as Category 1A flammable gas) and will have the following GHS pictogram:



Storage: Storage of pyrophoric chemicals must adhere to the requirements outlined in the Chemical Hygiene Plan.

Handling: In addition to the requirements outlined in the Chemical Hygiene Plan the following should be considered when handling pyrophoric chemicals.

- Never return excess chemicals to the original container. Small amount of impurities may be introduced into the container which may cause a fire or explosion.
- Must be handled in a signed, designated area.
- Must be used in a fume hood if inhalation hazard is present.
- Consider using disposable work surface covers (bench protectors) and dispose daily.
- Immediately close all containers of pyrophoric chemicals after use.
- Do not dispense pyrophoric chemicals directly onto a laboratory balance in the general lab space. Instead, use sealable pre-tared container to hold material while using balance.

Personal Protective Equipment: Reference SDS. Unless working in a glove box, it is highly recommended that a fire-resistant lab coat be worn while manipulating quantities of pyrophoric liquids over 10 mL or solids over 1 gram. Consider the use of Nomex/Leather poly's gloves, which provide fire resistance without compromising manual dexterity. These gloves should be worn over nitrile gloves and are recommended during syringe/cannula transfers of pyrophoric liquids.

Spill and Decontamination: For spills of solid materials, do not dry sweep. Decontamination procedures vary depending on the material being handled. Reference SDS. All surfaces and equipment should be wiped with the appropriate cleaning agent following dispensing or handling to prevent accumulation of acutely toxic chemical residue.