Alkyl Lithium:
- Used as initiators for anionic polymerization and in synthesis of complex organic molecules.
- Is pyrophoric (ignites spontaneously in presence of air (oxygen) or moisture)
- Pyrophoricity is dependent on concentration, flashpoint of solvents. At low concentrations, it has less tendency to ignite by itself.

Safe handling/Precautions:
- Proper PPE (nitrile gloves, splash goggles, lab coat, etc.) must be used.
- The reaction flask must be clamped in the hood and always be under inert atmosphere (nitrogen/argon).
- The commercial bottle should be placed in a secondary container (e.g., crystallization dish) and clamped prior to transfer.
- Large-scale reactions should be performed in the presence of a spotter who is ready to intervene if necessary.
- Small scale operation can be performed using syringe (with screw head) technique. Purge the reagent bottle with inert gas, and use well dried syringe to withdraw the butyl lithium.

Disposal:
- Small residues can be quenched inside the hood by diluting with hexane or heptane and slowly adding this solution to 2 M isopropanol in hexane.
- Reusable needles should be quenched immediately; disposables should be quenched before discarded.
- Old containers with lot of solid residue must be sent out for safe disposal.

First Aid:

**EYE CONTACT (EXTREMELY SERIOUS)**
- Treatment Summary
  - Flush with plenty of water: 15 minutes.
  - Lift upper / lower lids intermittently.
  - Seek medical attention immediately.

**SKIN CONTACT**
- Treatment Summary
  - Flush with plenty of water: 15 minutes.
  - Remove contaminated clothing.
  - Wash clothing with soap and water.
  - Seek medical attention immediately.

**INHALATION**
- Treatment Summary
  - Escape to fresh air.
  - Give artificial respiration if breathing stops.
  - Seek medical attention immediately, especially if breathing discomfort occurs.