Butyllithium – We use large amounts of alkyllithium reagents that are extremely pyrophoric (catch fire in air). Extreme caution must be exercised when using alkyllithium reagents! Whenever using alkllithium, your work area must be clean and free of solvent containers, paper, water, and other potentially flammable material. It is advisable to keep a person on hand to “Fire Guard”. This person will pull the pin on the extinguisher and be ready to spray the second anything catches fire.

The butyllithium cylinders are equipped with a 3-way valve to enable the transfer of solution without exposure to the atmosphere. When transferring butyllithium, the following directions will be used:

1. Attach nitrogen source to Luer-lock inlet #3 (Refer to figure above)
2. Make sure main valve on Butyllithium cylinder is closed.
3. Turn 3-way valve so that it points to inlet #3.
4. For tert-butyllithium, flush transfer line thoroughly with nitrogen before attaching addition funnel. (Do not do this for n-butyllithium)
5. Attach transfer line to addition funnel through septa while flushing with nitrogen.
6. Turn valve to inlet #1.
7. Carefully open main cylinder valve to begin transfer of butyllithium. Control rate with main valve. NEVER LEAVE THIS UNATTENDED!
8. When desired amount of material has been transferred, close main valve.
9. With the 3-way valve still open to #1 inlet, remove nitrogen line from inlet #3 and attach a 50ml syringe filled with hexanes to Luer-lock.
10. Open 3-way valve to #3 inlet and inject contents of syringe into line to flush. Turn 3-way valve to mid-position (closed) and refill syringe. Repeat flush procedure.
11. Turn 3-way valve to mid-position (closed) and attach nitrogen line. Flush line thoroughly with nitrogen.