

- Swage together empty silane container with a new valve
- Clear Workspace in the fume hood, place down a clean workcloth
- Label Swage Fitting (get label from drawer next to Objet30Pro)
  - Write full chemical name
  - Write "Full <Insert Date>"
  - Weigh the valve/container/tag assembly
  - Record weight and write "Empty <Insert Weight>"
- Get a fat dispensing tip from the blue trays above the workbench across from fume hood 1 and get a plastic syringe from the cabinets under the shelves of supplies
- Insert the dispensing tip into the tip of the syringe and discard the plastic plunger. This will function as a funnel for pouring the silane directly into the container without the valve interfering with fluid flow
- Get a large ziploc bag. Write "Silane Contaminated Waste" on the bag with sharpie. Open bag.
- Get the cardboard box containing the glovebag from the supply shelves. Take out a glovebag, the length of ¼" tubing (with rubber bands), and binder clips.
  -
- Unfold the glove bag and place in the fume hood, with the open part of the glovebag facing out towards the opening of the fume hood.
- Disconnect the Silane chamber nitrogen tube from the fume hood nitrogen port regulator. Connect one end of the ¼" tube to the nitrogen regulator and insert the other end of the tube into the small port on the side. Secure with rubber bands.
- Get a container of silane and remove the tape around the lid. **DO NOT OPEN THE SILANE.**
- Place the open marked ziploc bag, the clean swage silane container assembly, the modified syringe, and a couple of Kimwipes in the glove bag
- Roll the open end several times and seal with binder clips to create an airtight environment.
- Turn on the Nitrogen (5 psi fills the glove bag reasonably fast)
- Cut tip on outlet valve so that the glove bag will not pop
- Fill and flush the glove bag with nitrogen, without letting the bag fill to the point that it is taut
- Let the nitrogen gas flow for 5 minutes to create an inert environment inside the glove bag
- Delicately put on glove bags gloves without disturbing the contents
- Insert the modified syringe into the silane container valve, pushing past the valve mechanism
- Open the Silane and carefully pour the liquid into the stainless steel container
- Lift the modified syringe needle out of the container, close the stainless steel container valve
- Put the dispensing tip inside the bottle to prevent punctures
- Use the Kim wipes to wipe up any spilled silane, place all waste inside labeled ziploc bag
- Seal the hazardous waste bag, and open the glove bag

- Dispose of the hazardous waste bag in the hazardous waste bin
- Remove the N<sub>2</sub> tube from the glove bag and reattach to the Silane deposition chamber.
- Fold up the glove bag, place along with tubes and rubber bands in the cardboard box
- Weigh the new Silane container (full) and record the weight on the tag
- Close old Silane valve, remove old assembly from the deposition chamber
- Attach the new Silane chamber (Do not open valve until chamber has been purged)
- Run Silane deposition cycle to check outcome of new container.



The silane chamber is located in 3430 Elings hall, in fume hood #1.

This chemical reacts violently with water in the air to create highly concentrated hydrochloric acid (HCl).