SMIF Mask Cleaning Procedures

Procedure #1:
Acetone Rinse, IPA Rinse, N2 Dry.

This procedure should be done routinely upon completion of your exposure. This alone should keep your mask clean and ready for use, provided you are using standard SMIF supplied S1813 Positive Resist or Futurrex Negative Resist. It MUST be done in the Solvent hood.

1. While holding the photomask by the edges, rinse the mask with Acetone, using the Acetone squirt bottle
2. Rinse the mask with IPA, using the IPA squirt bottle
3. Dry the photomask using the N2 gun

Procedure #2:
1165 Stripper (NMP), 65C, 1hr Pyrex Beaker, N2 Dry.

This procedure should remove most hardened resists and organic polymers, including SU8. It MUST be done in the Solvent hood.

1. Pour 1165 stripper into a beaker. Use a large enough beaker to hold your photomask, and use enough chemical to completely cover the mask when submerged.
2. Place the beaker on the hot plate and heat to 65C
3. Place the photomask in the beaker and soak in the heated 1165 for 1 hour
4. Remove the photomask from the beaker and rinse the mask with IPA, using the IPA squirt bottle
5. Dry the photomask using the N2 gun
6. Allow beaker of 1165 to cool, and then dispose of the chemical in the solvent drain. Rinse the beaker with IPA

Procedure #3:
Piranha Clean (Sulfuric Acid/Hydrogen Peroxide 90/10 by Volume), 5 minutes, Pyrex Beaker, N2 Dry.

This procedure is very aggressive, highly reactive, and exothermic. Piranha cleans are commonly used for cleaning silicon substrates. This clean should be done using as little chemical as possible. Hydrogen Peroxide should be added to the Sulfuric Acid AFTER the mask has been placed in the Sulfuric bath. It MUST be done in the Acid hood wearing full chemical protection gear.

1. Pour Sulfuric acid into a beaker. Use a large enough beaker to hold your photomask, and use enough chemical to completely cover the mask when submerged.
2. Place the photomask in the beaker
3. Add Hydrogen Peroxide (10% by volume).
4. Soak the photomask for 5 minutes in the Piranha solution
5. Remove the photomask from the beaker and rinse the mask with DI water
6. Dry the photomask using the N2 gun
7. Allow beaker of Piranha to cool, and then dispose of the chemical in the acid drain. Rinse the beaker with DI water.