LIFT OFF USING TOLUENE SOP

September 2013

Toluene lift off is a good method to use if the polarity of your mask does NOT suit image reversal using the YES oven.

Procedure:

1. Spin on your 1800 series resist as normal.

2. Soft bake your wafer at 90°C for 60 sec.

3. Expose your resist on the contact aligner using the prescribed times given at the machine for your photoresist at 4000 RPM or use your own best time.

4. Soak your wafer in Toluene for 60 sec and dry completely with N₂.

5. Return your wafer to the hotplate at 90°C for 15 sec (be consistent with your time!)

6. Develop using MF-319

7. Inspect to insure that your resist is developed. You will see a black boundary around each feature. This is the undercut of the toluene treated resist which is needed for successful lift off.

8. You may need to do some ashing in the March RIE, but you want to avoid that because it will remove the shadow mask lip that you spent all of this time on with the Toluene process.