

Lithography Study

AZ 1512 Procedure

1. Start from a Clean Wafer
2. Dehydration: 120°C baking for 10 mins
3. Adhesive promotor coating: Programmed HMDS coating (Program 1)
4. Spin coating:
 - Note. To ensure adhesive promotor active, start PR spin coating right after HMDS coating.
 - a. Dispense sufficient amount of AZ 1512 from the center of the wafer covering 60% - 70% of the wafer surface.
 - b. Spin at 500 rpm for 20 seconds to spread out the photoresist.
 - c. Spin at 4000 rpm for 35 seconds to reach 1.3 micrometer in thickness. (+ or - 476 nm)
5. Soft Bake: 110°C (1 min)
6. Exposure: 2.4 seconds with expose dose 40 mJ.
7. Develop:
 - a. 50 seconds gentle agitation in AZ 300MIF solution.
 - b. (Optional) Stir the wafer slightly to remove red PR residue floating on top of wafer.
8. Rinsing: Dip into water to remove developer
9. Dry: Blow dry the wafer with compressed Nitrogen gun.

Result Expectation:

For pattern dimension larger or equal to 2 micrometers, single layer pattern has 75° or higher cross-sectional angle at the silicon substrate.

