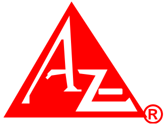


AZ® EBR 70/30

AZ® EBR 70/30 Features

AZ® EBR 70/30 is an excellent candidate for replacement of 'typical' EBR solvents such as 100% PGMEA, 90% PGMEA / 10% Acetone, or other "blended" EBR systems.

AZ® EBR 70/30 typically provides the following benefits over competitive EBR systems:
1) reduced odor threshold and a reduction in "operator concerns" related to solvent smells
2) aggressive EBR composition which allows for reduced dispense volume or cycle time in many cases
3) sharper, more defined resist edge and improved process latitude
4) high flashpoint and low vapor pressure minimizes safety & ESHA impact
5) manufactured to superior quality specifications (particles, trace metals, etc)

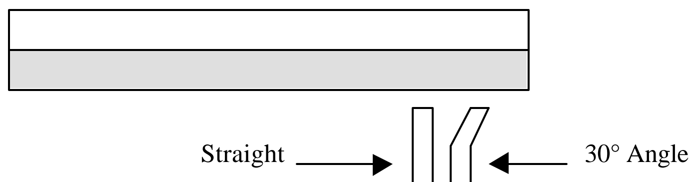
Typical AZ® EBR 70/30 Process Conditions

Many factors impact the establishment of a good EBR process; wafer size, resist thickness, and soft bake conditions are just a few of them. However, most customers find they can simply implement AZ® EBR 70/30 using the nearly same process conditions they currently use.

For reference, we have included the following baseline process conditions for reference.

Parameter	Range
Canister Pressure	10 to 12 psi
Pressure at Nozzle	4 to 6 psi
Dispense Time	5 to 15 seconds
Dispense Speed	300 to 1000 rpm
Dry Speed	500 to 2000 rpm
Nozzle Position	30° to 40° slightly against wafer rotation
Nozzle Height	½" to ¾" from wafer
Exhaust	100 to 400 LFM

AZ® EBR 70/30 is both a good backside and top EBR. The backside nozzle is typically pointed straight up. To achieve a slightly larger edge, the nozzle can be tilted 30° toward the wafer edge.



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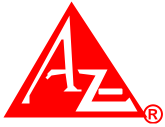
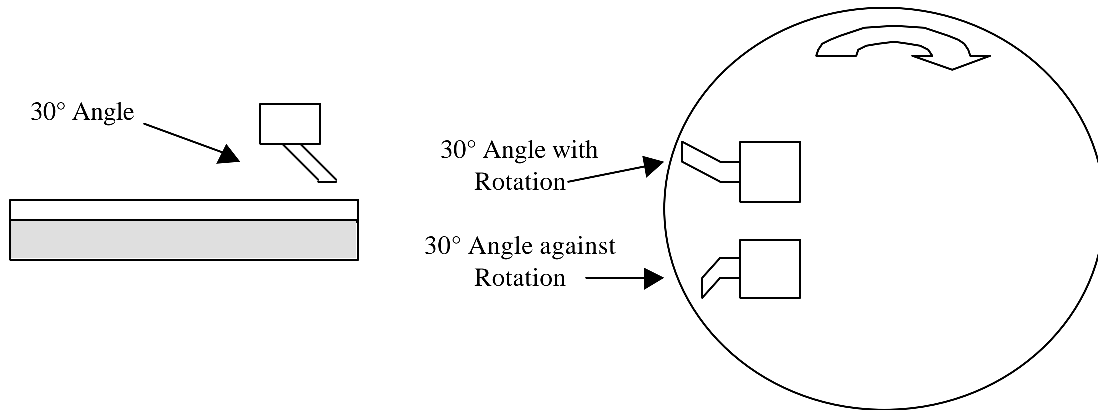
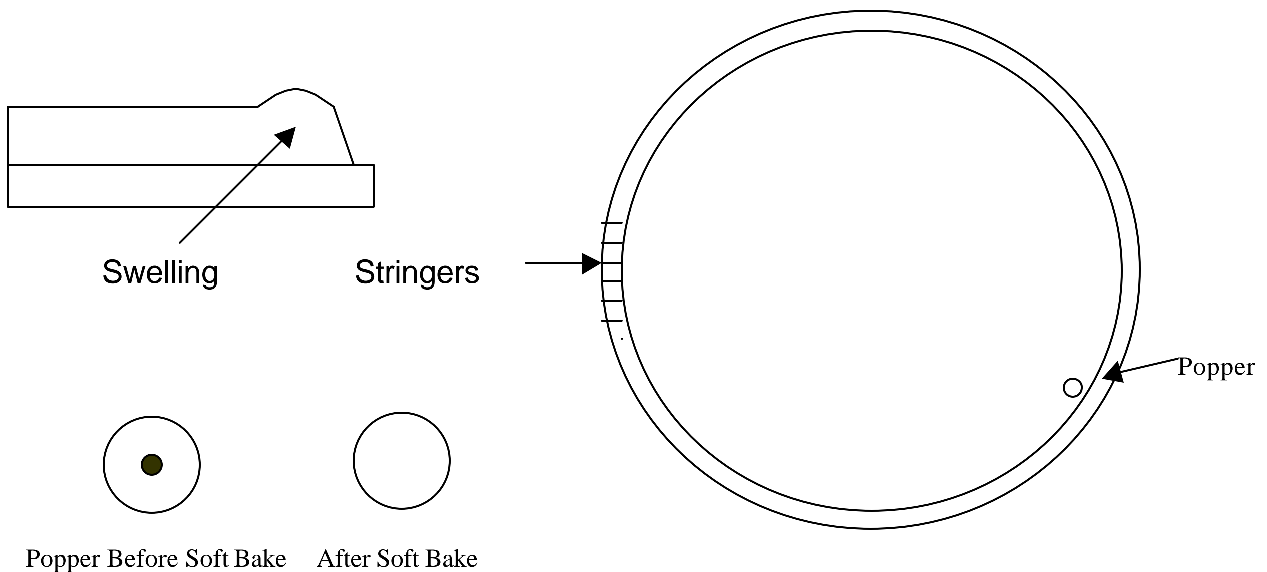


When processing with a top-side EBR, it is best to use a 30° angle on the needle toward the edge of the wafer as well as with the rotation.



Dispensing against the rotation can cause splash back, which will leave many small dots on the wafer. To check for splash back, check particles on a bare wafer and then perform the EBR with a particle check afterwards. If the particles are too high, check the angle of the nozzle.

Swelling, Stringers, and Poppers from the Leaching Effect are all controllable by optimizing the rotation speed (RPM).



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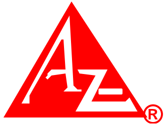


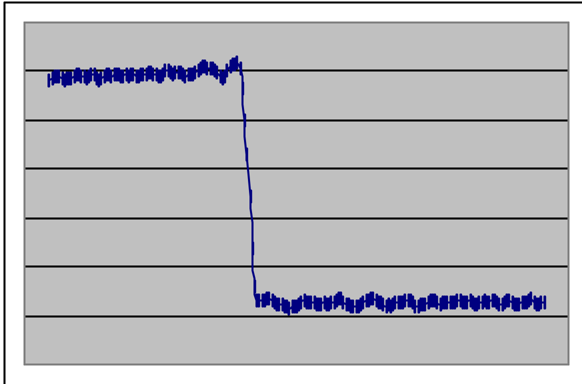
Top Down SEM of Edge Bead

Process Conditions

Film thickness on Silicon = 1µ

Canister Pressure	10 psi
Pressure at Nozzle	5 psi
Dispense Time	5 Seconds
Dispense Speed	800 rpm
Dry Speed	1200 rpm
Nozzle Position	30° w/rotation
Nozzle Height	½" from wafer
Exhaust	100 LFM

Profile of Edge



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