

BENEFITS

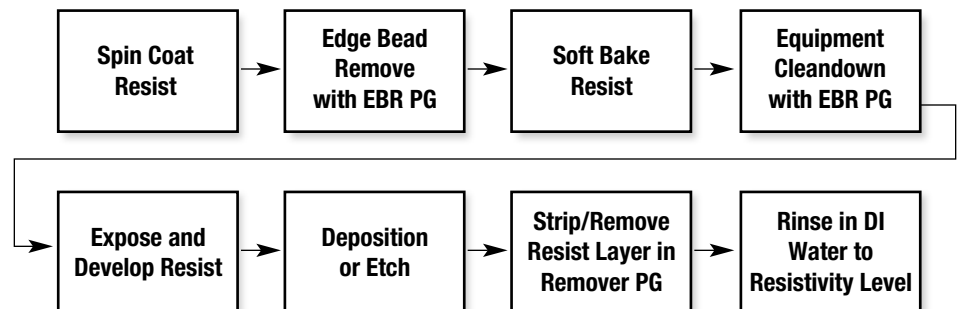
- Permits use of single universal edge bead remover
- Low dispense volumes and reduced disposal costs
- Excellent for spin bowl and equipment clean up

COMPATIBLE WITH

- PMGI & LOR
- PMMA & copolymer
- SU-8
- g-line, i-line and DUV resists

NANO™ EBR PG (Edge Bead Remover)

EBR PG is specifically formulated to quickly and cleanly remove edge beads that build-up during the spin coat process. Edge bead removal is performed immediately after spin coat by directing a stream of EBR PG near the edge of the wafer while it is spinning. The edge bead remover nozzle can be positioned near the wafer's edge to dispense EBR PG from the top or from the backside/bottom. By controlling spin speed, nozzle position, and nozzle direction, the resist edge bead is removed. It is important during edge bead removal that the backside of the wafer/substrate not be contaminated with resist from the front. By choosing a spin speed appropriate for the size of the wafer, the resulting centrifugal force prevents this problem.



The edge bead removal process is equipment and substrate specific. Therefore, the following baseline process suggestions may be modified and optimized after considering the following:

- Wafer size
- Topside or backside EBR dispense
- Nozzle position and angle with respect to wafer edge
- Thickness of edge bead being removed

PROCESS GUIDELINES

- a. After resist spin coat, reduce spin speed to 800rpm*.
- b. Dispense EBR PG, at ~3psi, for 3 seconds while maintaining 800rpm*.
- c. Ramp to 1000rpm** at 5000rpm/sec for 3-5 additional seconds of EBR dispense.
- d. Turn EBR dispense off.
- e. Accelerate to 2500rpm at 1000rpm/sec. Continue to spin for 10 seconds.
- g. Reduce spin speed to 0 at 1000rpm/sec.

*Increase spin speed for smaller wafers, e.g. 1000rpm for 4" wafers.

**1500rpm for 4" wafers.

HANDLING (ENVIRONMENTAL, HEALTH AND SAFETY)

CAUTION! EBR PG is a FLAMMABLE liquid. Use precautions in handling EBR PG. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Avoid breathing fumes. Wear chemical-resistant eye protection, chemical gloves (butyl, neoprene) and protective clothing when handling EBR PG. Contact with eyes, skin, and mucous membranes causes irritation. In case of eye contact, flush with water for 15 minutes lifting eyelids frequently. Call a physician immediately. Review the current MSDS (Material Safety Data Sheet) before using.

MATERIAL AND EQUIPMENT COMPATIBILITY

EBR PG is compatible with glass, ceramic, PTFE(TEFLON), stainless steel, and equivalent materials. The primary ingredient, a cyclic ether, will attack various elastomers such as VITON A, BUNA N, EPDM, and NEOPRENE over time. It will also attack PVC, CPVC and polyester. PTFE is recommended for both O-rings and tubing.

STORAGE

Store REMOVER PG upright in original containers in a dry area between 4 and 27°C(40-80°F). EBR PG is an organic FLAMMABLE liquid. Keep away from sources of ignition, light, heat, oxidants, acids, and reducers. Shelf life is 13 months from date of manufacture.

DISPOSAL

Each locality, state, and county has unique regulations regarding the disposal of organic solvent solutions of dissolved polymer such as used EBR PG. It is the responsibility of the customer to ensure proper disposal in compliance with all applicable Federal/Local codes and regulations. See MSDS for additional information.

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