MICRO • CHEM

APPLICATIONS

- Conformal coatings
- Ideal for perforated, small, large & irregular shaped substrates
- Backside wafer coatings
- Severe topography, v-grooves, vias & other MEMs structures
- Microfluidic electrophoresis analysis (Lab-on chip)

PRODUCT ATTRIBUTES

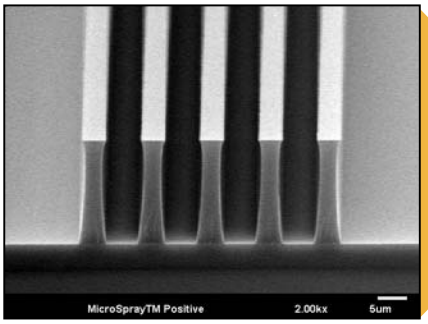
- Multi purpose resist product - excellent R&D tool
- Very low cost of ownership - no expensive coating equipment required
- Thick resist coatings demonstrated from 6- 16µm
- Compatible with MIF and metal-ion aqueous developers
- High throughput for thick films

MicroSpray™ Photoresist

MicroSpray is a positive acting, aerosol resist, well suited for a broad range of lithographic purposes. This cost effective, easy to use, spray-can eliminates many of the process problems associated with spin coating thick resists and non-planar substrates such as those found in MEMs, Opto-electronics and other non-standard applications.

MicroSpray™ Process Parameters

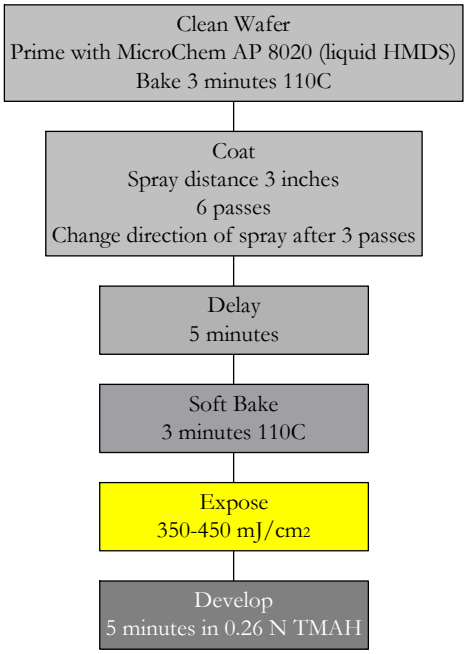
Substrate:	Silicon
Photoresist:	MicroSpray™ Positive
Prime:	MicroChem AP 8020 (20% HMDS)
Bake:	110°C/3 min. hotplate
Coat:	Spray 8 right angle passes
Pause:	20°C/5 min.
Soft bake:	110°C/3 min.
Exposure:	EVG 620 350-450 nm, 400 mJ/cm²
Develop:	RHEM CD-26 (0.26 N TMAH) 5 min.



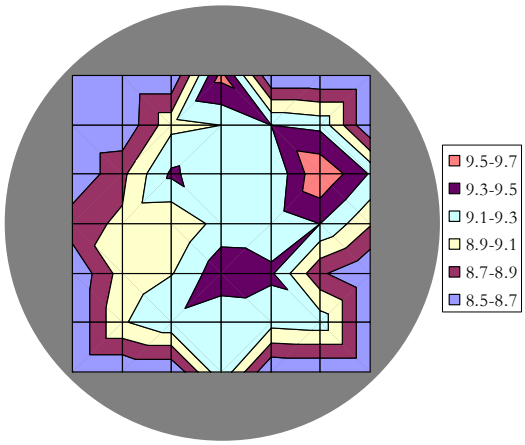
4 µm Lines/Spaces in 16 µm thick Spray Coating of MicroSprayTM

HOW TO USE MICROSPRAY

- Store can refrigerated for best use
- Place can at room temperature 1 hour prior to use
- Shake can vigorously 10 times
- Wait 5 minutes
- Make sure substrate is clean
- Prime wafer with HMDS
- Hold can 3 inches from surface
- Spray surface using 6 overlapping patterns
- Wait 5 minutes (micro-bubbles will disappear)
- Bake coated substrate for 3 minutes at 110^{o}C
- Expose coated substrate to UV light (350-450 mJ/cm^{2})
- Develop for 4-6 minutes in 2.38% TMAH (or NaOH)
- Rinse and Drv



COATING UNIFORMITY



Coating thickness (100 mm)	**9.14 µm**
Standard deviation	**0.24 µm (2.6%)**

MicroSpray™ Product Specifications

Container:	Aerosol can
Weight:	16 oz. (454 g.)
Dimensions:	8 in tall, 2.5 in.. dia.
Resist volume:	14.5 oz. (411 g.)
Coatings:	200, 4 in. wafers (approx.)
Shipping:	Air and ground