



Adhesion Promoter for AR Resists

Photoresists

AR 300-80 new adhesion promoter

For improving the adhesive strength of photo and e-beam resists

Characterisation

- improvement of the adhesive strength of photo and e-beam resist films
- especially for surfaces with low adhesion properties, e.g. metal, SiO₂, GaAs
- AR 300-80 new: spin coating of a silicium organic solution = improved adhesion properties and simple, cheaper alternative to HDMS

Properties

Parameter / AR	300-80 new
Density at 20 °C (g/cm ³)	0.971
Flash point (°C)	46
Filtration (µm)	0.2
Storage temperature (°C)	10-22

Processing information AR 300-80 new

AR 300-80 new is applied by spin coating between 1000 and 6000 rpm. The film thickness can be adjusted by varying the spin speed to the optimum conditions of the respective process.

Higher spin speeds and thus thinner films are preferable, e.g. 4000 rpm with approx. 15 nm thickness. Too high concentrations (film thickness values) may reduce or neutralise the adhesion-promoting effect.

It is recommended for AR 300-80 new to perform the subsequent tempering on a hot plate for 2 min or in a convection oven for 25 min at 180 °C. AR 300-80 new offers the big advantage for sensitive substrates that a bake step at only 60 °C for the same amount of time is sufficient, even though higher temperatures are well tolerated.

During tempering, a very uniform, extremely thin layer of adhesion promoter is generated on the substrate (approx. 15 nm). After cooling of the substrate, the resist can be applied as usual.

An excess of adhesion promoter may be rinsed off with organic solvents like e.g. AR 600-71. The optimised surface properties are maintained without restriction.