



Aculon® EC, Nanoscale Epoxy Control

Product Information

Aculon EC nanoscale thickness (4nm) repellency product is a surface treatment that uses its hydrophobicity and oleophobicity characteristics to create epoxy repellent surfaces to control the location of epoxy used in semiconductor packaging. Applications include eliminating die attach epoxy bleed, reduce underfill epoxy keep-out areas around flipchip die, and eliminating EMC mold flash contamination. Added features include: wirebondable when used on a metal wirebond pad, repels: water, oil, flux, solder paste, and many solvents. In general use, it is designed to bond to most metals and certain polymers and resists chemical and mechanical degradation.

Physical Properties of Post Treatment Coating	
Visible Light Transmission	100%
Coating Thickness	2-4nm
Solvent and Chemical Resistance	High
Hydrophobicity (Water Contact Angle on Flat Substrate)	116°
Oleophobicity (Oil Contact Angle on Flat Substrate)	80°
Sliding Angle of Water Droplet	20-30°
Coating degradation temperature	225°C

Physical Properties of Formulation (all values @ 25°C)	
Viscosity*	2 cP
Boiling Point of Solvent	78°C
Flash Point	13.9°C
Environmental	Non toxic, non-ozone depleting, flammable
Shelf Life	2 Years (Unopened container)
Specific Gravity	0.98g/ml

*Determined by Zahn Cup #1 testing

Features

- Repels water, oil, and other liquid organic materials
- Excellent chemical bonding to many surfaces
- Lowers the coefficient of friction of surfaces (results in a 'slick' feeling)
- No stress build-up on the substrates
- Does not change the appearance of the surface
- Easy to apply and safe to use (take flammable liquid precautions)
- Adhesion to a broad range of substrates
- Does not leach from surfaces after application and drying
- Does not polymerize upon drying, so over-application is not a problem