

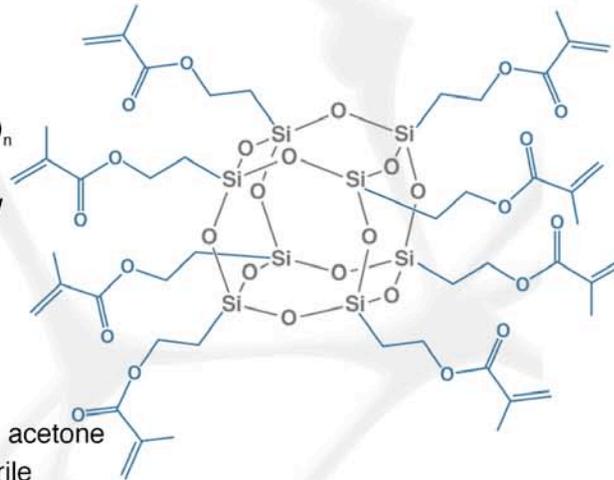
MA0735 Methacryl-POSS®: Anti-Reflective Coating

MA0735 based anti-reflective coatings are robust and high performance. They exhibit strong potential for commercial applications in photovoltaics and various optoelectronic equipment, which are routinely exposed to adverse outdoor conditions. When applied to glass substrates, MA0735 anti-reflective coatings have the following effects:

- broadband anti-reflection property; excellent quasi-omnidirectional transmittance from (-50°) to (+50°) of angles of incidence; increased transmittance of double-sided anti-reflective coating glass (SEE TABLE 1)
- superior resistance to moisture, heat, salinity and exposure to acid (SEE GRAPH 1)
- better adhesion to glass substrates and impressive scratch resistance

PHYSICAL PROPERTIES

Molecular/Chemical Formula:	$(C_7H_{11}O_2)_n(SiO_{1.5})_n$
Formula Weight:	1433.97
Appearance:	clear, pale yellow viscous liquid
Density:	1.20 g/mL
Refractive index:	1.46
Viscosity (@ 25°C):	18 poise
Thermal Stability (5% weight loss):	386°C
Solvent Solubility:	THF, chloroform, acetone ethanol, acetonitrile
Solvent Insolubility:	water, hexane
Resin Solubility:	aromatic and aliphatic resins



GRAPH 1: M-POSS ARCC glass resistance to moisture, heat, salinity and acid solutions.

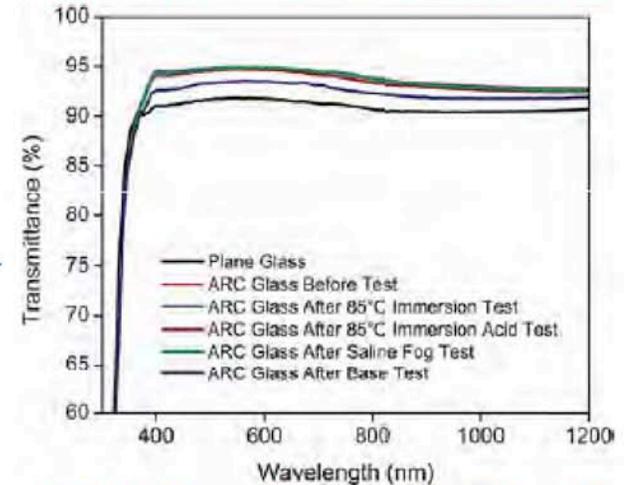


TABLE 1: Transmittance and hemispherical reflectance of POSS-based moth's eye glass and plane glass

		Optical properties	
Type of Glass		Transmittance (%)	Reflectance (%)
Moth's eye	Double-sided ARC	98.09 +/- 0.07	1.29 +/- 0.03
ARC Glass	Single-side ARC	95.07 +/- 0.10	4.92 +/- 0.05
Plane glass	None	91.91 +/- 0.12	8.10 +/- 0.09

AVAILABILITY

MA0735 is available in R&D and bulk quantities. Contact info@hybridplastics.com for a quote.

WARRANTY

The information contained herein is believed to be accurate and reliable. However, the user is responsible for determining the suitability and use of the final formulations/products. Hybrid Plastics® warrants that its products will meet specifications, but not merchantability or fitness for use.