Methacryl POSS®

FEATURES
Clear, colorless liquid oil.

DESCRIPTION
MA0735 is a hybrid molecule with an inorganic silsequioxane at the core and organic methacrylate groups attached at the corners of the cage. MA0735 can provide fast UV stability, enhanced mechanical properties, excellent moisture resistance, increased adhesion and durability.

Appearance
Clear, colorless liquid oil
Viscosity (@25°C) 18 poise
Density 1.20 g/mL
Refractive Index 1.46
Formula Weight 1433.97
Resin Solubility Vinyl ester, acrylic, epoxy, urethane

APPLICATIONS
Adhesives and coatings that benefit from reduced shrinkage, scratch resistance, increased durability and high light transmission.

ADDITIONAL ATTRIBUTES
MA0735 is amenable to in situ surface classification via 185 nm UV, oxygen plasma or corona treatments. Upon exposure, the POSS cages convert into a silica surface. This attribute has been utilized for high hardness, silica-like surface coatings and/or bondable tie-layers for coating stacks on polymer film. MA0735 is also amenable to high resolution patterning and imprint processing methods.

REGULATORY STATUS
REACH, TSCA, CAS 160185-24-0.
Not a primary dermal irritant.

HANDLING PRECAUTIONS
Product safety information required for safe use is not included in this document. Before handling, read product and material safety data sheets and container labels for safe use, physical health and hazard information. For material safety data information, contact Hybrid.

BENEFITS
Enhanced adhesion and coating durability while providing 98% light transmission, hardness and impact resistance. MA0735 also compatibilizes nanosilica while providing desirable rheological diluent effects.

COMPATIBILITY

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<th>Solvents</th>
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<td>iPropanol (70%)</td>
<td>Soluble</td>
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<tr>
<td>PGMEA</td>
<td>Soluble</td>
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RELATED LITERATURE
1. DOI: 10.1039/c3ee24037a
2. DOI: 10.1021/la1025119
3. DOI: 10.1039/C2JM32386A
4. DOI: 10.1002/pen.23921
5. DOI: 10.1002/cjoc.20119033

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