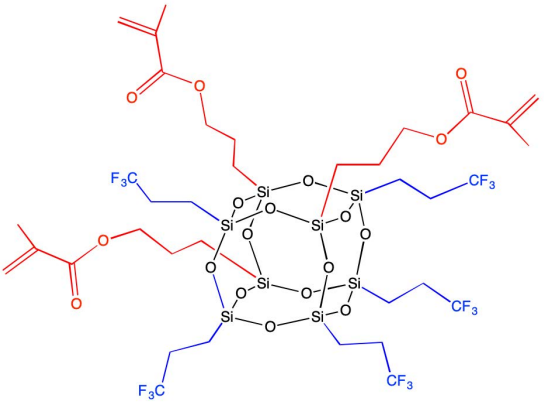
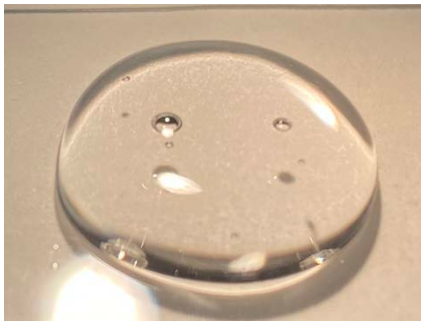
TrifluoropropylMethacrylate POSS®

Clear, transparent liquid.





APPLICATIONS

Surface energy control, Hydrophobic wetting and moisture barrier. Additional use as a compatabilizer can be realized in certain formulations.

TYPICAL PROPERTIES

Appearance	Clear, light yellow liquid
Viscosity (@25˚C)	31-29 Pa s shear thinning 1-100 s^{-1}
Refractive Index	1.4271 @ 20.1 °C
Formula Weight	1283.46 for octamer
Solvent Solubility	Ethers, Ketones, Alcohols
Solvent Insolubility	Water, Hexanes, Hydrocarbons

REGULATORY STATUS

R&D use only at this time.

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

Free radical and addition cure. The combination of reactivity and hydrophobicy provides for interfacial compatibility, and and surface modification. The crosslinking capability in combination with trifluoropropyl provides for resistance to moisture uptake and low surface energy while retaining optical transmission.

DESCRIPTION

Trifluoropropyl methacrylate POSS® is a liquid hybrid molecule with an inorganic silsesquioxane core and organic groups attached at the corners of the cage. Trifluoropropyl methacrylate POSS® is a molecular union of both chemistry and inorganic-organic composition.

COMPATIBILITY

Trifluoropropyl methacrylate POSS® is is intended to be utilized as an additive. At low additive concentrations compatibility is expected with a wide range of resins and monomers bearing similar chemical functionality.

Compatibility testing is recommended for higher concentrations. Additional information and screening may be provided by Hybrid upon request.

ADDITIONAL DETAILS

Trifluoropropyl methacrylate POSS® is a mixture of cages sizes 8, 10, 12. The organic groups are distributed randomly around each cage core. The organic groups are randomly distributed around each cage core. The molar ratio of trifluoropropyl and methacryl groups is 5:3 for HC0507.53.

The distribution of cage size, and functionality around the cage core is analogous to that for functional copolymers. Heteroleptic Cage POSS are represented by the catalog designation HC. The structure shown is idealized and should not be considered exact.

ADDITIONAL MOLAR RATIOS AVAILABLE

6:2 TFP:MA product number HC0507.31