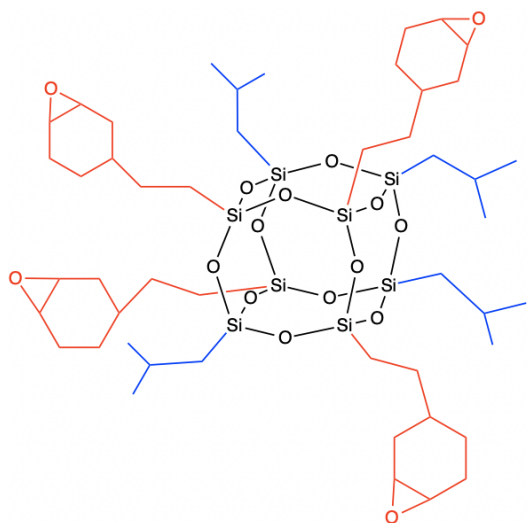


Cyclo-Hexyl-Ethyl-Epoxy i-Butyl POSS[®]



APPLICATIONS

Adhesives, Coatings, provides Hydrophobicity with crosslinking for Cationic and Thermal Addition cure. Additionally, Dispersion and Plasticization can be realized in certain formulations.

TYPICAL PROPERTIES

Appearance	Clear, Extremely Viscous
Viscosity @25°C	410-450 Pa s
Refractive Index	1.4841 @ 21 °C
Molecular Weight (octamer)	1145.86 g/mol
Equivalent Weight	286
Solvent Solubility-	cyclohexane, IPA, n-Butyl Acetate, PMEA
Solvent Insolubility-	Water

REGULATORY STATUS

R&D use only at this time.
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 UV Cationic and Addition Cure. The combination of reactivity and hydrophobicity provides for interfacial compatibility and dispersion. The high crosslinking capability in combination with i-Butyl provides for resistance to moisture uptake and water repellency, while retaining optical transmission.

DESCRIPTION

Cyclo-Hexyl-Ethyl-Epoxy i-Butyl POSS is a hybrid molecule with an inorganic silsesquioxane core and organic reactive groups attached at the corners of the cage.

Cyclo-Hexyl-Ethyl-Epoxy i-Butyl POSS is a molecular union of both Chemistry and Organic- Inorganic compositions.

COMPATIBILITY Cyclo-Hexyl-Ethyl-Epoxy i-Butyl POSS is highly adhesive and can be provided as a concentrate in solvents/ monomers & resins.

Cyclo-Hexyl-Ethyl-Epoxy i-Butyl POSS is intended to be utilized as an additive. At low additive concentrations, (0.5-3.0 wt%), compatibility can be 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

Cyclo-Hexyl-Ethyl-Epoxy i-Butyl POSS is a mixture of cage sizes 8, 10, and 12. The organic groups are distributed randomly around each cage core. The molar ratio of cyclohexyl epoxy and i-Butyl groups is an approximate 1:1.

The distribution of cage size and functionality around the cage core is analogous to that for functional polymers.

Heteroleptic cage POSS are represented by the catalog designation HC. The structure shown is idealized and should not be considered exact.