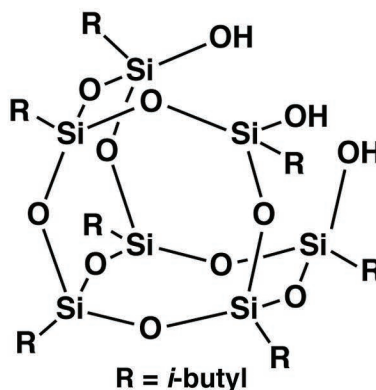


TriSilanolisobutyl POSS[®]

S01450

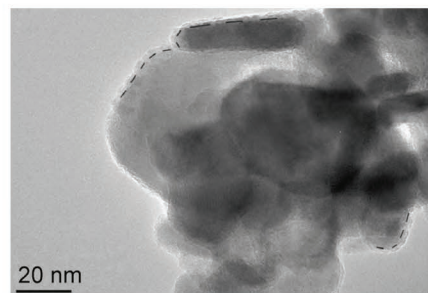
SO1450 is a hybrid molecule with an inorganic silsequioxane at the core, organic isobutyl groups attached at the corners of the cage and three active silanol functionalities. SO1450 can be used for surface modification of fillers, such as metal oxides, and other materials. It is also effective as an additive to thermoplastics and thermoset polymers for improving moisture resistance and process-ability.



$$\text{C}_{28}\text{H}_{66}\text{O}_{12}\text{Si}_7$$

FW 791.42

$$D_4^{20} 1.13$$

$$n_D^{20} 1.48$$
Key Properties**Appearance:** white powder**Thermal Stability (5% wt loss):** 210°C**Solvent Solubility:** THF, chloroform, hexane**Solvent Insolubility:** acetonitrile**Resin Solubility:** aliphatic monomers, oligomers,
PP, PE, PA

TEM micrograph showing SO1450 on surface of pigment particles

Relevant Literature

- Poly(vinyl alcohol)/Sulfonated POSS Hybrid Membranes for Direct Methanol Fuel Cell Applications - *Polym. Adv. Technol.* 2007; 18: 535–543
- Poly(ethylene terephthalate) Nanocomposites - *JAPS*, Vol. 107, 272–279 (2008)
- Amphiphiles at the Air/Water Interface - *JACS*. 2002, 124, 15194-15195
- TiO₂ surface modifiers for transparent acrylic UV blocking coating - *Progress in Organic Coatings* 74(4) Aug. 2012, 654–659
- Pigment surface modifiers for fluoropolymer based (TSSS) paint coatings - *Solar Energy Materials and Solar Cells* 95(2) Feb. 2011, 423–431

CAS 307531-92-6 Authorizations: TSCA, INCI

\$60/100g \$275/kg