OctaSilane POSS®

SH1310

SH1310 is a hybrid molecule with an inorganic silsequioxane at the core and dimethylsilane groups attached at the corners of the cage. SH1310 can used as a glassification aid and as a crosslinker. It has also been used for surface modification.

$$\begin{array}{c|c} & \text{HMe}_2\text{SiO} & \text{OSiMe}_2\text{H} \\ & \text{HMe}_2\text{SiO} & \text{Si} & \text{O} \\ & \text{O} & \text{Si} & \text{O} \\ & \text{O} & \text{OSiMe}_2\text{H} \\ & \text{HMe}_2\text{SiO} & \text{Si} & \text{OSiMe}_2\text{H} \\ & \text{HMe}_2\text{SiO} & \text{OSiMe}_2\text{H} \\ \end{array}$$

C₁₆H₅₆O₂₀Si₁₆

FW 1017.99

 D_4^{20} 1.23

 $n_{\rm D}^{20}$ 1.43

Key Properties

Appearance: white powder

Thermal Stability (5% wt loss): 210°C

Solvent Solubility: THF, chloroform, hexane

Solvent Insolubility: water, methanol **Resin Solubility:** alkene monomers

Relevant Literature

- Polyhedral Liquid Crystal Silsesquioxanes Appl. Organometal. Chem. 13, 261-272 (1999)
- · Hydrosilated Dendritic Networks of POSS Cores and Diacetylene Linkers -Macromolecules, 2009, 42 (12), pp 3992–4001
- Photosensitive compositions employing silicon-containing additives World Patent 2008/098189

CAS N/A Authorizations: None

\$620/100g \$4340/kg