PEG POSS® Cage Mixture

PG1190

PG1190 is a hybrid molecule with an inorganic silsequioxane at the core and organic polyethylene glycol groups attached at the corners of the cage. This rigid core acts like molecular ball bearings and provides high film strength to reduce friction and wear. PG1190 is very stable even at high loadings and temperatures. It is also useful in lithium batteries, biomaterials, cosmetics, and dispersion of oxide and carbon particles.

\[
R = \text{-CH}_2\text{CH}_2(\text{OCH}_2\text{CH}_2)_m\text{OCH}_3, m = \sim 10
\]

\[
(C_{2m+3}H_{4m+7}O_{m+1})_n(SiO_{1.5})_n, n = 8, 10, 12 (n=8 shown), m \equiv 10
\]

Key Properties

- Appearance: clear, colorless liquid
- Viscosity (@ 25°C): 280 centipoise
- Thermal Stability (5% wt loss): 250°C
- Solvent Solubility: water, alcohols
- Solvent Insolubility: hexane
- Resin Solubility: polyethers and polyesters

Relevant Literature


CAS 1255649-48-9  Authorizations: LVE

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