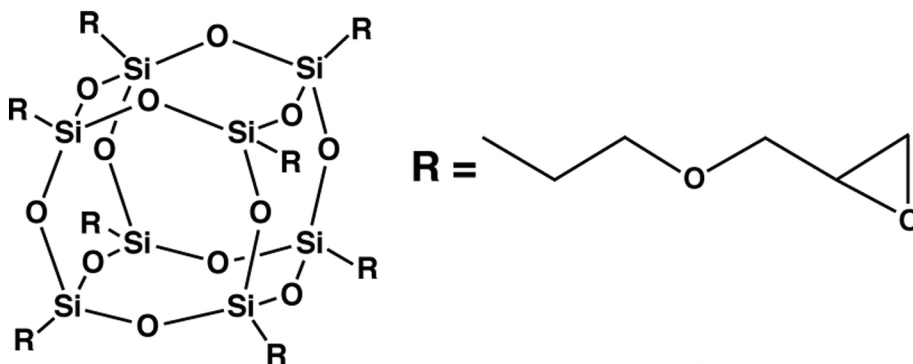


# Glycidyl POSS® Cage Mixture

**EP0409**

EP0409 is a hybrid molecule with an inorganic silsequioxane at the core and organic glycidyl groups attached at the corners of the cage. EP0409 serves as a high temperature reactive diluent in both aromatic and aliphatic epoxy resin and will increase rubbery plateau modulus. POSS molecules also have robust resistance to environmental degradation such as moisture, oxidation, corrosion and UV radiation. EP0409 is also excellent at dispersing silica particles.



$(C_6H_{11}O_2)_n(SiO_{1.5})_n$     FW 1337.88     $D_4^{20}$  1.25     $n_D^{20}$  1.51  
 n = 8, 10, 12 (n=8 shown)    Refrigerate    \* Cage content  $\geq$  65%

## Key Properties

**Epoxy Equivalent Weight:** 167

**Appearance:** Clear, pale yellow, viscous liquid

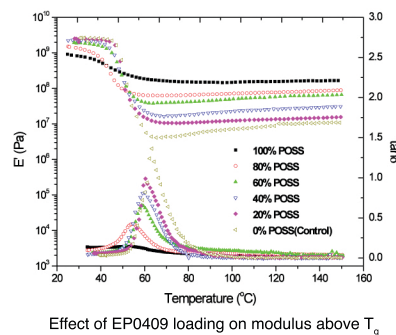
**Viscosity (@ 25°C):** 48 Poise

**Thermal Stability (5% wt loss):** 365°C

**Solvent Solubility:** THF, chloroform, toluene

**Solvent Insolubility:** water, hexane

**Resin Solubility:** aromatic and aliphatic epoxy resins



## Relevant Literature

- Lower residual thermal stress in composites  
*JAPS:B* 46 (2008) 2719-2732
- Sun protection in greenhouse covers  
*Adv. Mat. Res.* Vols.113-114 (2010) 2077-2080
- Reduced degradation of polyoxymethylene  
*Polymer Composites*, Vol. 32, (2011) 1584-1592
- Room temperature VARTM for marine composites  
*Polymer Preprints* **2008**, 49(1), 440

**CAS** 68611-45-0    **Authorizations:** INCI, TSCA

**\$100/100g    \$246/kg**