EP0408 for HXNBR Reinforcement

EP0408 is a hybrid molecule with an inorganic silsequioxane at the core, and organic epoxycyclohexyl groups attached at the corners of the cage. It is a yellow, semi-solid compound. It is soluble in many polar organic solvents, and aromatic and aliphatic epoxy resins, but is insoluble in non-polar organic solvents. When used as a crosslinker in hydrogenated carboxylated nitrile rubber (HXNBR), EP0408 increases modulus, glass transition temperature, cross link density and degree of heterogeneity. Its high volume cage structure also leads to a decrease in the dielectric constant of the rubber.

PHYSICAL PROPERTIES

Molecular/Chemical Formula: \((\text{C}_9\text{H}_{13}\text{O})_n\text{(SiO}_{1.5})_n\)  
Molecular Weight: 1416 - 2127  
Epoxy Equivalent Weight: 177  
Appearance: Clear, pale yellow/orange, semi-solid  
Density: 1.24 g/mL  
Refractive index: 1.52  
Viscosity (@ 60°C): 500 Poise  
Thermal Stability (5% weight loss): 403°C  
Solvent Solubility: THF, chloroform, isopropanol  
Solvent Insolubility: hexane  
Resin Solubility: aromatic and aliphatic epoxy resins

AVAILABILITY

EP0408 is available in R&D and bulk quantities. Contact us at info@hybridplastics.com for a quote.

WARRANTY

The information contained herein is believed to be accurate and reliable. However, the user is responsible for determining the suitability and use of the final formulations/products. Hybrid Plastics® warrants that its products will meet specifications, but not merchantability or fitness for use.