

POSS® Nanosilica Dispersion

MA4L35.01 is two reinforcing agents in one. MA0735 is a hybrid, 1.5nm molecule with an inorganic silsequioxane at the core, and organic methacrylate groups attached at the corners of the cage, which acts as a multifunctional crosslinker. 30 weight percent of 20nm nanosilica is completely dispersed into the MA0735, creating a clear, colorless gel which is easily blended into other systems. Recent research has demonstrated MA0735 is excellent at increasing the flow during compounding and molding of hydrogenated butadiene-acrylonitrile rubber and enhancing the mechanical properties and aging resistance after crosslinking. The 30% silica improves the reinforcement even more.

PHYSICAL PROPERTIES

Molecular/Chemical Formula: $(C_{77}H_{11}O_2)_n(SiO_{1.5})_n$ n=8, 10, 12

Molecular Weight: 1433 - 2150

Appearance: clear, colorless gel

Viscosity (Shear Rate 10sec^{-1})

25°C 659 Poise

50°C 378 Poise

75°C 94 Poise

Thermal Stability

(5% weight loss): 394°C

Solvent Solubility: THF, chloroform, acetone, acetonitrile, ethanol

Solvent Insolubility: water

Resin Solubility: aromatic and aliphatic resins

AVAILABILITY

MA4L35.01 is available in R&D and bulk quantities.

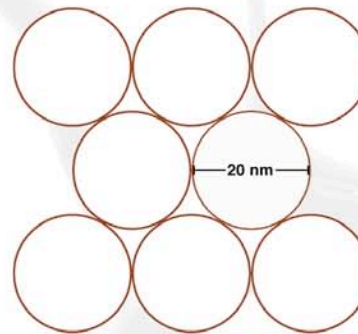
Contact info@hybridplastics.com for a quote.

WARRANTY

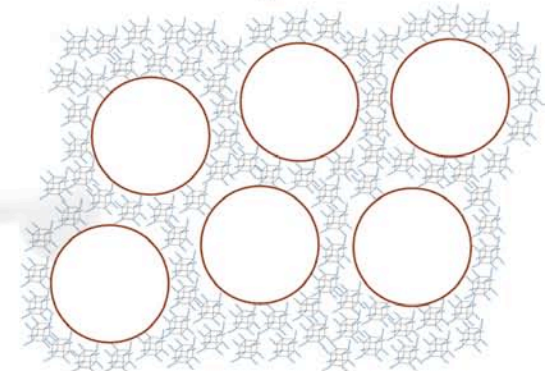
The information contained herein is believed to be accurate and reliable. However, the user is responsible for determining the suitability and use of the final formulations/products. Hybrid Plastics® warrants that its products will meet specifications, but not merchantability or fitness for use.

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Nanosilica without POSS®



Nanosilica with POSS®



At less than 1/10th the diameter of nanosilica, POSS® allows for increased flow properties while maintaining and enhancing the mechanical advantages of nanosilica.