

## Shinil Chemical SHINNANO PA-6 Polymer Nanocomposite Engine Cover and Bumper

Category : Polymer , Thermoplastic , Nylon , Nylon 6

### Material Notes:

SHINNANO is the product line of polymer nanocomposite made by dispersing nano fillers, mainly, NANOCLAY. Recently, Shinil has developed various nanocomposite grades for automotive applications using Shinil's proprietary dispersion technology combined with the customized nanoclay. Shinil's SHINNANO offers unique properties compared to conventional polymer compounds. Nanocomposite products of SHINNANO provide not only high performance but also the lighter weight (10-20%). SHINNANO uses various engineering polymers to produce functional nanocomposite grades. Nanoclays are incorporated during the melt compounding. The clay particles are exfoliated during processing, which leads to nano-size platelets. Although this process is challenging, owing to unique dispersion technique that is developed for nano materials, Shinil produces high performance nanocomposites with less use of nano fillers. SHINNANO grades are available for automotive parts such as bumper, instrument panel, door trim, engine cover, cylinder head cover, and air intake manifold.

**Feature and Benefits**  
 Lighter weight  
 High stiffness  
 High HD  
 High modulus  
 Improved surface  
 Improved melt strength  
 Recyclability  
 Available for injection molding, extrusion or film making  
 Cost effective  
 Good barrier property

Information Provided by Shinil Chemical Industry Co., Ltd.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Shinil-Chemical-SHINNANO-PA-6-Polymer-Nanocomposite-Engine-Cover-and-Bumper.php](http://www.lookpolymers.com/polymer_Shinil-Chemical-SHINNANO-PA-6-Polymer-Nanocomposite-Engine-Cover-and-Bumper.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	88.3 MPa	12800 psi	
Elongation at Break	2.0 %	2.0 %	
Flexural Strength	117.72 MPa	17074 psi	
Flexural Modulus	5.88 GPa	853 ksi	
Izod Impact, Notched	0.294 J/cm	0.551 ft-lb/in	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	195 Å°C	383 Å°F	

Processing Properties	Metric	English	Comments
Processing Temperature	250 Å°C	482 Å°F	

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