

Borealis Nepol™ GB402HP 40% Long Glass Fiber Reinforced Polypropylene

Categories: [Polymer](#); [Thermoplastic](#); [Polypropylene \(PP\)](#); [Polypropylene with 40% Glass Fiber Filler](#)



Material Notes: Nepol GB402HP is a 40% long glass fiber reinforced polypropylene grade, produced using Borealis' proprietary and exclusive, patented Nepol technology intended for injection molding and extrusion. The long glass fibers, chemically coupled to the polypropylene matrix, are providing Nepol GB303HP with outstanding mechanical properties such as high strength, high stiffness and excellent impact resistance.

Nepol GB402HP has been designed for front end carriers, structural parts, dashboard carriers, door module carriers, and lead bearing automotive parts.

Information provided by the Manufacturer.

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0040 cm/cm	0.0040 in/in	Borealis Method
Melt Flow	2.0 g/10 min @Load 2.16 kg, Temperature 230 °C	2.0 g/10 min @Load 4.76 lb, Temperature 446 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Elongation at Break	2.0 %	2.0 %	ISO 527-2
Tensile Modulus	9.00 GPa	1310 ksi	At 1 mm/min; ISO 527-2
Flexural Modulus	8.40 GPa	1220 ksi	At 2 mm/min; ISO 178
Charpy Impact Unnotched	5.70 J/cm ²	27.1 ft-lb/in ²	ISO 179/1eU
 Charpy Impact Unnotched	5.50 J/cm ² @Temperature -20.0 °C	26.2 ft-lb/in ² @Temperature -4.00 °F	ISO 179/1eU
Charpy Impact, Notched	2.80 J/cm ²	13.3 ft-lb/in ²	ISO 179/1eA
 Charpy Impact, Notched	3.20 J/cm ² @Temperature -20.0 °C	15.2 ft-lb/in ² @Temperature -4.00 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	162 °C	324 °F	ISO 75-2
Vicat Softening Point	145 °C	293 °F	B (50N); ISO 306

Processing Properties	Metric	English	Comments
Front Barrel Temperature	220 - 240 °C	428 - 464 °F	
Melt Temperature	240 - 270 °C	464 - 518 °F	
Mold Temperature	60.0 - 100 °C	140 - 212 °F	
Screw Speed	30 - 150 rpm	30 - 150 rpm	

Descriptive Properties

Fogging, mg	1.7	At 100°C/ 16 hours
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Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.