Borealis Xmod™ GB305HP High Performance 35% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene with 40% Glass Fiber Filler

Material Notes:

Xmod GB305HP is reinforced with 35% chemically coupled glass fibers and based on a specific Polymer matrix material that is bringing excellent mechanical properties (biaxial impact behavior) as well as a very good stiffness at higher temperatures. The grade is equipped with an long-term high heat stabilization package.Xmod GB305HP has been developed especially for the automotive market for applications that require high mechanical strengths at high service temperatures e.g. for parts under the bonnet: air intake manifold, parts for cooling system, and technical components exposed to high heat over longer time.Information provided by the Manufacturer.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Borealis-Xmod-GB305HP-High-Performance-35-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in³	ISO 1183
Linear Mold Shrinkage, Flow	0.0020 - 0.0030 cm/cm @Thickness 4.00 mm	0.0020 - 0.0030 in/in @Thickness 0.157 in	In Flow Direction; Borealis Method
	<= 0.0030 cm/cm @Thickness 4.00 mm	<= 0.0030 in/in @Thickness 0.157 in	In Flow Direction; Borealis Method
Linear Mold Shrinkage, Transverse	0.0080 - 0.012 cm/cm	0.0080 - 0.012 in/in	Borealis Method
Melt Flow	1.8 g/10 min @Load 2.16 kg, Temperature 230 °C	1.8 g/10 min @Load 4.76 lb, Temperature 446 °F	ISO 1133
Spiral Flow	106 cm @Thickness 2.00 mm, Temperature 250 °C	41.7 in @Thickness 0.0787 in, Temperature 482 °F	Borealis Method

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	115 MPa	16700 psi	ISO 527-2
	48.0 MPa @Temperature 100 °C	6960 psi @Temperature 212 °F	ISO 527-2
Elongation at Break	3.2 %	3.2 %	ISO 527-2
	5.5 % @Temperature 100 °C	5.5 % @Temperature 212 °F	ISO 527-2
Tensile Modulus	9.00 GPa	1310 ksi	ISO 527-2
	4.50 GPa	653 ksi	

Mechanical Properties	Metric	English	Comments
	@Temperature 100 °C	@Temperature 212 °F	ISO 527-2
Flexural Strength	160 MPa	23200 psi	ISO 178
Flexural Modulus	7.50 GPa	1090 ksi	ISO 178
Charpy Impact Unnotched	5.80 J/cm²	27.6 ft-lb/in²	ISO 179/1eU
	5.40 J/cm² @Temperature -20.0 °C	25.7 ft-lb/in² @Temperature -4.00 °F	ISO 179/1eU
Charpy Impact, Notched	1.20 J/cm²	5.71 ft-lb/in²	ISO 179/1eA
Impact Test	9.00 J @Thickness 3.00 mm	6.64 ft-lb @Thickness 0.118 in	Biaxial, Total Energy; ISO 6603T

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	152 °C	306 °F	HDT-A; ISO 75-2
Vicat Softening Point	140 °C	284 °F	B (50 N); ISO 306

Optical Properties	Metric	English	Comments
Gloss	82 % @Thickness 2.00 mm	82 % @Thickness 0.0787 in	20°, plaque; DIN 67530
	90 % @Thickness 2.00 mm	90 % @Thickness 0.0787 in	60°, 2 mm plaque; DIN 67530

Processing Properties	Metric	English	Comments
Melt Temperature	230 - 260 °C	446 - 500 °F	
Mold Temperature	50.0 - 60.0 °C	122 - 140 °F	

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