

Borealis Xmod™ GD301HP High Performance 32% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene with 30% Glass Fiber Filler

Material Notes:

Xmod GD301HP is reinforced with 32% chemically coupled glass fibers and based on specific Polymer matrix material which is bringing excellent mechanical properties (impact behavior) and very good stiffness even at higher temperatures. Xmod GD301HP has been developed especially for the fluid engineering and automotive market for applications which require high mechanical strengths at high service temperatures. These include pump housings, valves, pedal carriers, and technical components under the bonnet. Information provided by the Manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Borealis-Xmod-GD301HP-High-Performance-32-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.15 g/cc	0.0415 lb/in³	ISO 1183
Linear Mold Shrinkage, Flow	<= 0.0020 cm/cm @Thickness 2.00 mm	<= 0.0020 in/in @Thickness 0.0787 in	In Flow Direction; Borealis Method
Linear Mold Shrinkage, Transverse	>= 0.010 cm/cm	>= 0.010 in/in	Borealis Method
Melt Flow	4.0 g/10 min @Load 2.16 kg, Temperature 230 °C	4.0 g/10 min @Load 4.76 lb, Temperature 446 °F	ISO 1133
Spiral Flow	95.0 cm @Thickness 2.00 mm, Temperature 250 °C	37.4 in @Thickness 0.0787 in, Temperature 482 °F	Borealis Method

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	45.0 MPa @Temperature 100 °C	6530 psi @Temperature 212 °F	ISO 527-2
Tensile Strength, Yield	108 MPa	15700 psi	At 50 mm/min; ISO 527-2
Elongation at Break	2.9 %	2.9 %	ISO 527-2
	7.5 % @Temperature 100 °C	7.5 % @Temperature 212 °F	ISO 527-2
Elongation at Yield	3.2 %	3.2 %	Flexural Strain; ISO 178
Tensile Modulus	8.10 GPa	1170 ksi	ISO 527-2
	3.50 GPa @Temperature 100 °C	508 ksi @Temperature 212 °F	ISO 527-2

Mechanical Properties	Metric ^{Pa}	English ^{psi}	Comments
Flexural Modulus	6.80 GPa	986 ksi	ISO 178
Charpy Impact Unnotched	4.70 J/cm ²	22.4 ft-lb/in ²	ISO 179/1eU
	4.40 J/cm ² @Temperature -20.0 °C	20.9 ft-lb/in ² @Temperature -4.00 °F	ISO 179/1eU
Charpy Impact, Notched	0.950 J/cm ²	4.52 ft-lb/in ²	ISO 179/1eA
	0.850 J/cm ² @Temperature -20.0 °C	4.05 ft-lb/in ² @Temperature -4.00 °F	ISO 179/1eA
Impact Test	5.00 J @Temperature -20.0 °C	3.69 ft-lb @Temperature -4.00 °F	ISO 6603T
	6.50 J @Thickness 3.00 mm	4.79 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	138 °C	280 °F	B (50 N); ISO 306
Shrinkage	<= 1.55 %	<= 1.55 %	Testbox; Borealis Method

Processing Properties	Metric	English	Comments
Melt Temperature	220 - 270 °C	428 - 518 °F	
Mold Temperature	30.0 - 50.0 °C	86.0 - 122 °F	

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