Fibremod™ GB402HP

Polypropylene

Borealis AG

Message:

Fibremod™ GB402HP is a 40 % long glass fibre reinforced polypropylene grade intended for injection moulding and extrusion. The long glass fibres, chemically coupled to the polypropylene matrix, are providing outstanding mechanical properties such as high strength, high stiffness and excellent impact behaviour.
Due to its excellent combination of properties this material can substitute in many applications other engineering plastics or metal alloys. A significant value of this material is the fact that it does not change its mechanical properties at humid conditions or water contact.
The product is available in standard black.

General Information	
UL YellowCard	E108112-101271165
Filler / Reinforcement	Long glass fiber, 40% filler by weight
Features	Rigidity, high High strength Chemical coupling Impact resistance, high Recyclable materials
Uses	Electrical/Electronic Applications Furniture Metal substitution Application in Automobile Field Car interior parts Automotive exterior parts Car dashboard
Appearance	Black
Forms	Particle
Processing Method	Extrusion Injection molding

Physical	Nominal Value	Unit	Test Method
Density	1.24	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	2.0	g/10 min	ISO 1133
Molding Shrinkage [1]			Internal method
Vertical flow direction: 2.00mm	0.60	%	Internal method
Flow direction: 2.00mm	0.10	%	Internal method
Hardness	**Nominal Value**	**Unit**	**Test Method**
Ball Indentation Hardness (H 132/10)	123	MPa	ISO 2039-1

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	9000	MPa	ISO 527-2/1
Tensile Stress (Yield, Injection Molded)	140	MPa	ISO 527-2/50
Tensile Strain (Break, Injection Molded)	2.0	%	ISO 527-2/50
Flexural Modulus [2] (Injection Molded)	8400	MPa	ISO 178
Flexural Stress (Injection Molded)	200	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, injection molding	40	kJ/m²	ISO 179/1eA
-20°C, injection molding	32	kJ/m²	ISO 179/1eA
23°C, injection molding	28	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-20°C, injection molding	55	kJ/m²	ISO 179/1eU
23°C, injection molding	57	kJ/m²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-20°C, injection molding	34	kJ/m²	ISO 180/1A
23°C, injection molding	31	kJ/m²	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, not annealed	166	°C	ISO 75-2/B
1.8 MPa, not annealed	162	°C	ISO 75-2/A
Vicat Softening Temperature			
--	165	°C	ISO 306/A50
--	145	°C	ISO 306/B50
Injection	**Nominal Value**	**Unit**	
Drying Temperature	80.0	°C	
Drying Time	2.0	hr	
Processing (Melt) Temp	220 - 260	°C	
Mold Temperature	40.0 - 80.0	°C	
Holding Pressure	30.0 - 60.0	MPa	
Injection instructions			
Feeding Temperature: 40 to 80°CBack pressure: As low as possibleScrew speed: Low to mediumFlow front speed: 100 - 200 mm/s			
NOTE			
1.	150x80x2 mm		
2.	2.0 mm/min		

Recommended distributors for this material

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