

Fibremod™ GB407HP

Polypropylene

Borealis AG

Message:

Fibremod GB407HP 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.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Features	Rigidity, high		
	High strength		
	Impact resistance, high		
	Recyclable materials		
	Heat resistance, high		
Uses	Application in Automobile Field		
	Car interior parts		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.24	g/cm ³	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 (1.00 mm)	9000	MPa	ISO 527-2
Tensile Stress	140	MPa	ISO 527-2
Tensile Strain (Break)	2.0	%	ISO 527-2/50
Flexural Modulus ²	8400	MPa	ISO 178
Flexural Stress	200	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	40	kJ/m ²	ISO 179/1eA

-20°C	32	kJ/m ²	ISO 179/1eA
23°C	28	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-20°C	55	kJ/m ²	ISO 179/1eU
23°C	57	kJ/m ²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-20°C	34	kJ/m ²	ISO 180/1A
23°C	31	kJ/m ²	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/A
--	145	°C	ISO 306/B
Injection	Nominal Value	Unit	
Mold Temperature	40.0 - 80.0	°C	
Holding Pressure	30.0 - 60.0	MPa	
Injection instructions			
Feeding Temperature: 40 - 80 °C Mass Temperature: 220 - 260 °C Back Pressure: Low to Medium Screw Speed: Low to Medium Flow Front Speed: 100 - 200 mm/s			
NOTE			
1.	150x80x2		
2.	2.0 mm/min		

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