

Borealis GB205U Polypropylene Compound, Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene with 20% Glass Fiber Filler

Material Notes:

GB205U is a 20% chemically coupled glass fiber reinforced polypropylene compound intended for injection molding. The product is available in natural but other colors can be provided on request. This material shows excellent mechanical properties also at elevated temperatures. Applications: GB205U has been developed especially for demanding applications in various engineering sectors including technical components exposed to high heat and loads, washing machine parts, and under the bonnet components. Information provided by Borealis AG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Borealis-GB205U-Polypropylene-Compound-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0020 cm/cm	0.0020 in/in	average process; in flow; 150x80x2mm
	0.011 cm/cm	0.011 in/in	average process; cross flow; 150x80x2mm
Melt Flow	2.2 g/10 min	2.2 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 230 °C	@Load 4.76 lb, Temperature 446 °F	

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	101 MPa	14600 psi	132 N/10s; ISO 2039
Tensile Strength, Yield	75.0 MPa	10900 psi	ISO 527-2
Elongation at Break	4.0 %	4.0 %	ISO 527-2
Elongation at Yield	3.5 %	3.5 %	ISO 527-2
Tensile Modulus	4.80 GPa	696 ksi	1mm/min; ISO 527-2
Flexural Strength	115 MPa	16700 psi	ISO 178
Flexural Modulus	4.40 GPa	638 ksi	ISO 178
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	ISO 180/1A
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	10.0 kJ/m ²	4.76 ft-lb/in ²	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	4.20 J/cm ²	20.0 ft-lb/in ²	ISO 179/1eU

Mechanical Properties	@Temperature -20.0 °C Metric	@Temperature -4.00 °F English	Comments
	4.50 J/cm ²	21.4 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.750 J/cm ²	3.57 ft-lb/in ²	ISO 179/1eA
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	1.05 J/cm ²	5.00 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	154 °C	309 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	140 °C	284 °F	ISO 75-2
Vicat Softening Point	130 °C	266 °F	ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
	160 °C	320 °F	ISO 306
	@Load 1.02 kg	@Load 2.25 lb	

Processing Properties	Metric	English	Comments
Processing Temperature	230 - 280 °C	446 - 536 °F	mass temperature
Feed Temperature	40.0 - 80.0 °C	104 - 176 °F	
Mold Temperature	30.0 - 50.0 °C	86.0 - 122 °F	
Injection Velocity	100 - 200 mm/sec	3.94 - 7.87 in/sec	
Hold Pressure	30.0 - 60.0 MPa	4350 - 8700 psi	

Descriptive Properties	Value	Comments
Back Pressure	as low as possible	
Emission (µgC/g)	15	VDA 277
Fogging (mg)	0.98	100°C;3h;DIN 75201
	1	100°C;16h;DIN 75201
Screw Speed	low to medium	

Descriptive Properties	Value	Comments
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Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China