

Borealis HK030U Polypropylene Compound

Category : Polymer , Thermoplastic , Polypropylene (PP)

Material Notes:

HK030U is a special low viscosity polypropylene compound developed to fit the production of PP-GF composites in the direct LFT compression and injection molding process as well as in combination with LGF concentrates on the injection molding process. The product is available in standard black 8229. Applications: HK030U has been developed especially for demanding applications in the automotive industry including front end carriers, noise shields, and under body shieldings. Information provided by Borealis AG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Borealis-HK030U-Polypropylene-Compound.php

Physical Properties	Metric	English	Comments
Density	0.905 g/cc	0.0327 lb/in ³	ISO 1183
Melt Flow	350 g/10 min @Load 2.16 kg, Temperature 230 °C	350 g/10 min @Load 4.76 lb, Temperature 446 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	72.0 MPa	10400 psi	132 N/10s; ISO 2039
Tensile Strength, Yield	33.0 MPa	4790 psi	50mm/min; ISO 527-2
Elongation at Break	6.0 %	6.0 %	50mm/min; ISO 527-2
Elongation at Yield	5.0 %	5.0 %	50mm/min; ISO 527-2
Tensile Modulus	1.55 GPa	225 ksi	1mm/min; ISO 527-2
Flexural Strength	43.0 MPa	6240 psi	
Flexural Modulus	1.45 GPa	210 ksi	2mm/min; ISO 178
Izod Impact, Notched (ISO)	1.60 kJ/m ² @Temperature -20.0 °C	0.761 ft-lb/in ² @Temperature -4.00 °F	ISO 180/1A
	1.80 kJ/m ² @Temperature 23.0 °C	0.857 ft-lb/in ² @Temperature 73.4 °F	ISO 180/1A
Charpy Impact Unnotched	1.10 J/cm ²	5.23 ft-lb/in ²	ISO 179/1eA
	4.50 J/cm ²	21.4 ft-lb/in ²	ISO 179/1eA
Charpy Impact, Notched	0.0800 J/cm ² @Temperature -30.0 °C	0.381 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	0.0900 J/cm ²	0.428 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature -20.0 °C	English @ Temperature -4.00 °F	ISO 179/1eA Comments
	0.100 J/cm ²	0.476 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	106 µm/m-°C @Temperature -30.0 - 80.0 °C	58.9 µin/in-°F @Temperature -22.0 - 176 °F	Borealis Method
Deflection Temperature at 0.46 MPa (66 psi)	91.0 °C	196 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	53.0 °C	127 °F	ISO 75-2
Vicat Softening Point	89.0 °C @Load 5.10 kg	192 °F @Load 11.2 lb	ISO 306
	151 °C @Load 1.02 kg	304 °F @Load 2.25 lb	ISO 306

Processing Properties	Metric	English	Comments
Processing Temperature	200 - 260 °C	392 - 500 °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	3.00 - 6.00 MPa	435 - 870 psi	

Descriptive Properties	Value	Comments
Back Pressure	low to medium	
Screw Speed	low to medium	

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