

Borealis HK060AE Polypropylene Homopolymer

Category : Polymer , Thermoplastic , Polypropylene (PP)

Material Notes:

HK060AE is a special low viscosity polypropylene homopolymer compound developed to fit the production of glass matt reinforced thermoplastics. This material is also suitable as base resin for 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. Applications: HK060AE has been developed especially for applications like front end carriers, under body shieldings, noise shields, dashboard carriers, and battery supports. Information provided by Borealis AG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Borealis-HK060AE-Polypropylene-Homopolymer.php

Physical Properties	Metric	English	Comments
Density	0.905 g/cc	0.0327 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.015 cm/cm	0.015 in/in	Borealis Method; average process
Melt Flow	125 g/10 min @Load 2.16 kg, Temperature 230 °C	125 g/10 min @Load 4.76 lb, Temperature 446 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	78.0 MPa	11300 psi	132 N/10s; ISO 2039
Tensile Strength, Yield	35.0 MPa	5080 psi	50mm/min; ISO 527-2
Elongation at Break	15 %	15 %	50mm/min; ISO 527-2
Elongation at Yield	8.0 %	8.0 %	50mm/min; ISO 527-2
Tensile Modulus	1.60 GPa	232 ksi	1mm/min; ISO 527-2
Flexural Strength	45.0 MPa	6530 psi	ISO 178
Flexural Modulus	1.55 GPa	225 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 @Temperature -20.0 °C	5.23 ft-lb/in ² @Temperature -4.00 °F	ISO 179/1eA
	5.50 J/cm ²	26.2 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1eA Comments
Charpy Impact, Notched	0.0800 J/cm ²	0.381 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.0900 J/cm ²	0.428 ft-lb/in ²	ISO 179/1eA
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	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	90.0 µm/m-°C	50.0 µin/in-°F	Borealis Method
	@Temperature -30.0 - 80.0 °C	@Temperature -22.0 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	91.0 °C	196 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	54.0 °C	129 °F	ISO 75-2
Vicat Softening Point	96.0 °C	205 °F	ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
	153 °C	307 °F	ISO 306
	@Load 1.02 kg	@Load 2.25 lb	

Processing Properties	Metric	English	Comments
Processing Temperature	200 - 250 °C	392 - 482 °F	mass temperature on double belt presses
	220 - 270 °C	428 - 518 °F	mass temperature for direct LFT compression or injection molding
Mold Temperature	30.0 - 60.0 °C	86.0 - 140 °F	

Descriptive Properties	Value	Comments
Injection Velocity	low to medium	

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