

Borealis Borcom™ WE007AE Polypropylene

Category : Polymer , Thermoplastic , Polypropylene (PP)

Material Notes:

Borcom™ WE007AE is a polypropylene microcomposite intended for injection molding. The product is available in natural color. This material has an excellent balance between impact strength and stiffness and gives a good surface quality. Applications: Borcom™ WE007AE has been developed especially for applications like bumpers, rocker panels, body side moldings, and body panels. Information provided by Borealis AG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Borealis-Borcom-WE007AE-Polypropylene.php

Physical Properties	Metric	English	Comments
Density	0.925 g/cc	0.0334 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0015 cm/cm	0.0015 in/in	post shrinkage (2h/90°C), Borealis Method
	0.0080 cm/cm	0.0080 in/in	mold average, Borealis Method
Melt Flow	12 g/10 min	12 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	36.0 MPa	5220 psi	ISO 2039
Tensile Strength, Yield	20.0 MPa	2900 psi	50mm/min; ISO 527-2
Elongation at Break	300 %	300 %	50mm/min; ISO 527-2
Elongation at Yield	7.0 %	7.0 %	50mm/min; ISO 527-2
Tensile Modulus	1.20 GPa	174 ksi	1mm/min; ISO 527-2
Flexural Strength	25.0 MPa	3630 psi	ISO 178
Flexural Modulus	1.25 GPa	181 ksi	2mm/min; ISO 178
Izod Impact, Notched (ISO)	5.00 kJ/m ²	2.38 ft-lb/in ²	ISO 180/A
	@Temperature -20.0 °C	@Temperature -4.00 °F	
Charpy Impact Unnotched	30.0 kJ/m ²	14.3 ft-lb/in ²	ISO 180/A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	14.8 J/cm ²	70.4 ft-lb/in ²	ISO 179/1eU
	@Temperature -20.0 °C	@Temperature -4.00 °F	

Mechanical Properties	Metric	English	Comments
	16.5 J/cm ²	78.5 ft-lb/in ²	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.470 J/cm ²	2.24 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.550 J/cm ²	2.62 ft-lb/in ²	ISO 179/1eA
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	3.50 J/cm ²	16.7 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	65.0 µm/m-°C	36.1 µin/in-°F	Borealis Method
	@Temperature -30.0 - 80.0 °C	@Temperature -22.0 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	89.0 °C	192 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	50.0 °C	122 °F	ISO 75-2
Vicat Softening Point	47.0 °C	117 °F	ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
	134 °C	273 °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	low to medium	
Screw Speed	low to medium	

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