

Borealis Daplen™ EF103AE Polypropylene TPO Compound

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene with 20% Mica Filler , Polypropylene, Mineral Reinforced

Material Notes:

Daplen™ EF103AE is a 10% mineral filled elastomer modified polypropylene compound intended for injection molding. This material has excellent balanced mechanical properties, high melt flow rate and gives a good surface quality. Applications: Daplen™ EF103AE has been developed especially for the car industry to be used in automotive exterior parts including bumpers, body side moldings, and body panels. Information provided by Borealis AG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Borealis-Daplen-EF103AE-Polypropylene-TPO-Compound.php

Physical Properties	Metric	English	Comments
Density	0.970 g/cc	0.0350 lb/in³	ISO 1183
Linear Mold Shrinkage	0.0010 cm/cm	0.0010 in/in	post shrinkage; 2 hours, 90°C
	0.0085 cm/cm	0.0085 in/in	mold average; Borealis Method
Melt Flow	16 g/10 min	16 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 230 °C	@Load 4.76 lb, Temperature 446 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	18.0 MPa	2610 psi	50mm/min; ISO 527-2
Elongation at Break	>= 100 %	>= 100 %	50mm/min; ISO 527-2
Elongation at Yield	8.0 %	8.0 %	50mm/min; ISO 527-2
Tensile Modulus	1.20 GPa	174 ksi	1mm/min; ISO 527-2
Flexural Strength	22.0 MPa	3190 psi	ISO 178
Flexural Modulus	1.20 GPa	174 ksi	2mm/min; ISO 178
Izod Impact, Notched (ISO)	6.50 kJ/m²	3.09 ft-lb/in²	ISO 180/1A
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	44.0 kJ/m²	20.9 ft-lb/in²	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	21.0 J/cm²	99.9 ft-lb/in²	ISO 179/1eU
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	0.540 J/cm ²	4.01 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.660 J/cm ²	3.14 ft-lb/in ²	ISO 179/1eA
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	4.60 J/cm ²	21.9 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 µm/m-°C	44.4 µin/in-°F	Borealis Method
	@Temperature -30.0 - 80.0 °C	@Temperature -22.0 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	83.0 °C	181 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	48.0 °C	118 °F	ISO 75-2
Vicat Softening Point	40.0 °C	104 °F	ISO 306
	@Load 5.10 kg	@Load 11.2 lb	

Processing Properties	Metric	English	Comments
Processing Temperature	220 - 260 °C	428 - 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	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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