

Borealis Daplen™ ED117AE Polypropylene TPO Compound

Category : Polymer , Thermoplastic , Elastomer, TPE , Thermoplastic Olefinic Elastomer (TPO) , Polypropylene (PP) , Polypropylene, Mineral Reinforced

Material Notes:

Daplen™ ED117AE is a 10% mineral filled elastomer modified polypropylene compound intended for injection molding. This material has excellent balanced mechanical properties and gives a good surface quality. Applications: Daplen™ ED117AE has been developed especially for the car industry to be used in automotive exterior parts, including bumpers and automotive exterior applications. Information provided by Borealis AG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Borealis-Daplen-ED117AE-Polypropylene-TPO-Compound.php

Physical Properties	Metric	English	Comments
Density	0.970 g/cc	0.0350 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0015 cm/cm	0.0015 in/in	post shrinkage (2h/90°C)
	0.010 cm/cm	0.010 in/in	mold average
Melt Flow	9.0 g/10 min	9.0 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	33.0 MPa	4790 psi	132 N/10 s; ISO 2039
Tensile Strength, Yield	18.0 MPa	2610 psi	50mm/min; ISO 527-2
Elongation at Break	>= 80 %	>= 80 %	ISO 527-2
Elongation at Yield	5.0 %	5.0 %	ISO 527-2
Tensile Modulus	1.25 GPa	181 ksi	1mm/min; ISO 527-2
Flexural Strength	23.0 MPa	3340 psi	ISO 178
Flexural Modulus	1.30 GPa	189 ksi	2mm/min; ISO 178
Izod Impact, Notched (ISO)	5.60 kJ/m ²	2.66 ft-lb/in ²	ISO 180/1A
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	55.0 kJ/m ²	26.2 ft-lb/in ²	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	^{NB} Metric	^{NB} English	Comments ISO 179/1eU
	@Temperature -20.0 °C	@Temperature -4.00 °F	
Charpy Impact, Notched	0.450 J/cm²	2.14 ft-lb/in²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.800 J/cm²	3.81 ft-lb/in²	ISO 179/1eA
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	5.00 J/cm²	23.8 ft-lb/in²	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)	92.0 °C	198 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	49.0 °C	120 °F	ISO 75-2
Vicat Softening Point	43.0 °C	109 °F	ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
	128 °C	262 °F	ISO 306
	@Load 1.02 kg	@Load 2.25 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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