

Borealis Daplen™ ED230HP Polypropylene TPO Compound

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

Material Notes:

Daplen™ ED230HP is a 20% mineral filled elastomer modified polypropylene compound intended for injection molding. This material has excellent balanced mechanical properties and gives a good surface quality. Applications: body panels and tailgates. Information provided by Borealis AG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Borealis-Daplen-ED230HP-Polypropylene-TPO-Compound.php

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0010 cm/cm	0.0010 in/in	post shrinkage (2h/90°C)
	0.0080 cm/cm	0.0080 in/in	mold average
Melt Flow	10 g/10 min	10 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	43.0 MPa	6240 psi	10N/132 s; ISO 2039
Tensile Strength, Yield	19.5 MPa	2830 psi	50mm/min; ISO 527-2
Elongation at Break	100 %	100 %	50mm/min; ISO 527-2
Elongation at Yield	4.5 %	4.5 %	50mm/min; ISO 527-2
Tensile Modulus	1.80 GPa	261 ksi	1mm/min; ISO 527-2
Flexural Strength	28.0 MPa	4060 psi	ISO 178
Flexural Modulus	1.90 GPa	276 ksi	2mm/min; ISO 178
Izod Impact, Notched (ISO)	4.00 kJ/m ²	1.90 ft-lb/in ²	ISO 180/1A
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	34.0 kJ/m ²	16.2 ft-lb/in ²	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	9.60 J/cm ²	45.7 ft-lb/in ²	ISO 179/1eU
	NB	NB	ISO 179/1eU
	0.300 J/cm ²	1.43 ft-lb/in ²	

Charpy Impact, Notched Mechanical Properties	Metric @ Temperature -30.0 °C	English @ Temperature -22.0 °F	ISO 179/1eA Comments
	0.400 J/cm²	1.90 ft-lb/in²	ISO 179/1eA
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	3.00 J/cm²	14.3 ft-lb/in²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	52.0 µm/m-°C	28.9 µin/in-°F	Borealis Method
	@Temperature -30.0 - 80.0 °C	@Temperature -22.0 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	105 °C	221 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	56.0 °C	133 °F	ISO 75-2
Vicat Softening Point	49.0 °C	120 °F	ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
	140 °C	284 °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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