

Borealis Daplen™ KB4436 Polypropylene TPO Compound

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

Material Notes:

Daplen™ KB4436 is a 30% mineral filled elastomer modified polypropylene compound intended for injection molding. This material has an excellent balance between impact strength and stiffness and gives a good surface quality. Applications: Daplen™ KB4436 has been developed especially for applications such as body side moldings, rocker panels, and window frames. Information provided by Borealis AG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Borealis-Daplen-KB4436-Polypropylene-TPO-Compound.php

Physical Properties	Metric	English	Comments
Density	1.12 g/cc	0.0405 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0010 cm/cm	0.0010 in/in	post shrinkage; 2 hours, 90°C
	0.0060 cm/cm	0.0060 in/in	mold average;Borealis Method
Melt Flow	20 g/10 min	20 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	26.0 MPa	3770 psi	132 N/10S; ISO 2039
Tensile Strength, Yield	16.0 MPa	2320 psi	50mm/min; ISO 527-2
Elongation at Break	>= 100 %	>= 100 %	50mm/min; ISO 527-2
Elongation at Yield	4.0 %	4.0 %	50mm/min; ISO 527-2
Tensile Modulus	2.10 GPa	305 ksi	1mm/min; ISO 527-2
Flexural Strength	23.0 MPa	3340 psi	ISO 178
Flexural Modulus	2.20 GPa	319 ksi	2mm/min; ISO 178
	15.0 kJ/m ²	7.14 ft-lb/in ²	
Izod Impact, Notched (ISO)	@Temperature -20.0 °C	@Temperature -4.00 °F	ISO 180/1A
	17.0 kJ/m ²	8.09 ft-lb/in ²	ISO 180/1A
Charpy Impact Unnotched	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/1eU
	4.50 J/cm ²	21.4 ft-lb/in ²	
	NB	NB	ISO 179/1eU

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
Charpy Impact, Notched	0.200 J/cm ²	0.952 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.350 J/cm ²	1.67 ft-lb/in ²	ISO 179/1eA
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	1.30 J/cm ²	6.19 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	32.0 µm/m-°C	17.8 µin/in-°F	Borealis Method
	@Temperature -30.0 - 80.0 °C	@Temperature -22.0 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	95.0 °C	203 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	51.0 °C	124 °F	ISO 75-2
Vicat Softening Point	36.0 °C	96.8 °F	ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
	116 °C	241 °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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