

Polykemi AB POLYfill PP CIM9040 Polypropylene, Mineral Reinforced

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene with 40% Talc Filler

Material Notes:

Information provided by Polykemi AB

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polykemi-AB-POLYfill-PP-CIM9040-Polypropylene-Mineral-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.23 g/cc	0.0444 lb/in ³	ISO 1183
Filler Content	40 %	40 %	±2%; Polykemi
Linear Mold Shrinkage	0.0070 - 0.0090 cm/cm	0.0070 - 0.0090 in/in	With Flow; ISO 2577
	0.0070 - 0.0090 cm/cm	0.0070 - 0.0090 in/in	Across Flow; ISO 2577
Melt Index of Compound	9.0 g/10 min @Load 2.16 kg, Temperature 230 °C	9.0 g/10 min @Load 4.76 lb, Temperature 446 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	<= 29.0 MPa	<= 4210 psi	ISO/R527
Elongation at Break	6.0 %	6.0 %	ISO/R527
Elongation at Yield	5.0 %	5.0 %	ISO/R527
Flexural Strength	<= 52.0 MPa	<= 7540 psi	ISO 178
Flexural Modulus	3.40 GPa @Temperature 23.0 °C	493 ksi @Temperature 73.4 °F	ISO 178
Charpy Impact Unnotched	1.00 J/cm ² @Temperature -20.0 °C	4.76 ft-lb/in ² @Temperature -4.00 °F	ISO 179
	1.80 J/cm ² @Temperature 23.0 °C	8.57 ft-lb/in ² @Temperature 73.4 °F	ISO 179
Charpy Impact, Notched	0.300 J/cm ² @Temperature -30.0 °C	1.43 ft-lb/in ² @Temperature -22.0 °F	ISO 179
	0.400 J/cm ² @Temperature 23.0 °C	1.90 ft-lb/in ² @Temperature 73.4 °F	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	50.0 - 70.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	27.8 - 38.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Polykemi
Deflection Temperature at 0.46 MPa (66 psi)	130 $^{\circ}\text{C}$	266 $^{\circ}\text{F}$	120 $^{\circ}\text{C}/\text{h}$; ISO 75/1
Deflection Temperature at 1.8 MPa (264 psi)	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	120 $^{\circ}\text{C}/\text{h}$; ISO 75/1
Vicat Softening Point	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	50 $^{\circ}\text{C}/\text{h}$; ISO 306
	@Load 5.001 kg	@Load 11.03 lb	
	150 $^{\circ}\text{C}$	302 $^{\circ}\text{F}$	50 $^{\circ}\text{C}/\text{h}$; ISO 306
	@Load 1.00 kg	@Load 2.21 lb	

Processing Properties	Metric	English	Comments
Melt Temperature	205 - 260 $^{\circ}\text{C}$	401 - 500 $^{\circ}\text{F}$	
Mold Temperature	40.0 - 80.0 $^{\circ}\text{C}$	104 - 176 $^{\circ}\text{F}$	
Drying Temperature	70.0 - 80.0 $^{\circ}\text{C}$	158 - 176 $^{\circ}\text{F}$	
Dry Time	2 - 4 hour	2 - 4 hour	in circulation dryer
	2 - 4 hour	2 - 4 hour	in desiccant air dryer
Injection Pressure	40.0 - 110 MPa	5800 - 16000 psi	
Back Pressure	1.00 - 2.00 MPa	145 - 290 psi	

Descriptive Properties	Value	Comments
Holding Pressure ()	20-40	% of injection pressure
Injection Speed ()	High	
Scratch Resistance, 10N (dL)	3.7	10N Fine Structure; ISO 1518/D65

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