

Solvay Specialty Polymers Kalix® 3850 Polyamide, High Performance (HPPA), 50% Glass Fiber

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 50% Glass Fiber Reinforced

Material Notes:

Kalix® 3850 is a 16% bio-sourced, amorphous polyphthalamide (PPA)-based compound with 50% by weight glass fiber reinforcement. This material is uniquely formulated to prevent warpage and flash in parts produced using the injection molding process. The composition of the material balances the low flash and warpage performance of Kalix® 3950 with superior mechanical performance including higher stiffness and strength. The material has been specifically developed to provide a high quality surface finish and fill thin wall section parts such as those used in mobile electronic devices. It also provides superior stain resistance in comparison to other polyamide-based materials. Features: Good Dimensional Stability; Good Impact Resistance; Good Surface Finish; High Flow; High Stiffness; High Strength; Hot Water Moldability; Low Warpage; Minimal Flash; Paintable; Platable; Stain Resistant Uses: Cell Phones; Electrical Parts; Electrical/Electronic Applications; Thin-walled Parts Injection Molding Notes: Kalix® compounds are shipped in moisture-resistant packages at moisture levels according to specifications. Sealed, undamaged bags should be preferably stored in a dry room at a maximum temperature of 50°C (122°F) and should be protected from possible damage. If only a portion of a package is used, the remaining material should be transferred into a sealable container. It is recommended that Kalix® resins be dried prior to molding. Additional Properties: Biobased Content - ASTM D6866 16 %; Flexural Elongation at Break - ISO 178 2.9 % Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Kalix-3850-Polyamide-High-Performance-HPPA-50-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.55 g/cc	0.0560 lb/in ³	ASTM D792
Filler Content	50 %	50 %	Glass Fiber
Water Absorption	0.17 % @Time 86400 sec	0.17 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.00010 cm/cm	0.00010 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0027 cm/cm	0.0027 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	260 MPa	37700 psi	ISO 527-2
Elongation at Break	2.6 %	2.6 %	ISO 527-2
Tensile Modulus	17.9 GPa	2600 ksi	ISO 527-2
Flexural Modulus	17.7 GPa	2570 ksi	ISO 178
Izod Impact, Notched (ISO)	17.0 kJ/m ²	8.09 ft-lb/in ²	Type 1, Notch A; ISO 180

Mechanical Properties ¹ (ISO)	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	145 Â°C	293 Â°F	HDT B; Unannealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	137 Â°C	279 Â°F	Annealed; ISO 75-2/A
Glass Transition Temp, Tg	144 Â°C	291 Â°F	DSC

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.86	3.86	ASTM D2520
	@Frequency 2.40e+9 Hz	@Frequency 2.40e+9 Hz	
	3.98	3.98	ASTM D2520
	@Frequency 1.00e+9 Hz	@Frequency 1.00e+9 Hz	
Dissipation Factor	0.013	0.013	Method B; ASTM D2520
	@Frequency 1.00e+9 Hz	@Frequency 1.00e+9 Hz	
	0.014	0.014	Method B; ASTM D2520
	@Frequency 2.40e+9 Hz	@Frequency 2.40e+9 Hz	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	270 Â°C	518 Â°F	
Front Barrel Temperature	300 Â°C	572 Â°F	
Melt Temperature	310 - 330 Â°C	590 - 626 Â°F	
Mold Temperature	80.0 - 130 Â°C	176 - 266 Â°F	
Drying Temperature	80.0 Â°C	176 Â°F	
	@Time 14400 - 43200 sec	@Time 4.00 - 12.0 hour	
Moisture Content	<= 0.090 %	<= 0.090 %	

Descriptive Properties	Value	Comments
Availability	Asia Pacific	

Europe

Descriptive Properties	Value	Comments
	North America	
Color	Black; White	
Form	Pellets	
Part Marking Code	>PA10I/10T/X-GF50<	ISO 11469
Processing Technique	Injection Molding; Water-Heated Mold Injection Molding	
RoHS Compliance	RoHS Compliant	

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