

Solvay Specialty Polymers Ixef® 1002 Polyarylamide (PARA) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyarylamide (PAA) , Polyarylamide, Glass Fiber Filled

Material Notes:

Ixef 1002 is a 30% glass-fiber reinforced, general purpose polyarylamide compound which exhibits high strength and rigidity, outstanding surface finish, and excellent creep resistance. - Black: Ixef 1002/9008 - Natural: Ixef 1002/0008 - Custom colorable

Injection Notes: Hot runners: 250°C to 260°C (482°F to 500°F) Drying The material as supplied is ready for molding without drying. However, If the bags have been open for longer than 24 hours, the material needs to be dried. When using a desiccant air dryer with dew point of -28°C (-18°F) or lower, these guidelines can be followed: 0.5-1.5 hour at 120°C (248°F), 1-3 hours at 100°C (212°F), or 1-7 hours at 80°C (176°F). Injection Molding IXEF 1002 compound can be readily injection molded in most screw injection molding machines. A general purpose screw is recommended, with minimum back pressure. The measured melt temperature should be about 280°C (536°F), and the barrel temperatures should be around 250°C to 260°C (482 to 500°F) in the rear zone, gradually increasing to 260 to 290°C (500 to 554°F) in the front zone. If hot runners are used, they should be set to 250 to 260°C (482 to 500°F). To maximize crystallinity, the temperature of the mold cavity surface must be held between 120 and 140°C (248 and 284°F). Molding at lower temperatures will produce articles that may warp, have poor surface appearance, and have a greater tendency to creep. Set injection pressure to give rapid injection. Adjust holding pressure and hold time to maximize part weight. Transfer from injection to hold pressure at the screw position just before the part is completely filled (95-99%). Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Ixef-1002-Polyarylamide-PARA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.43 g/cc	0.0517 lb/in ³	ISO 1183
Filler Content	30 %	30 %	Glass Fiber Reinforcement
Water Absorption	0.20 % @Temperature 23.0 °C, Time 86400 sec	0.20 % @Temperature 73.4 °F, Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	1.9 %	1.9 %	65% RH; Internal Method
Linear Mold Shrinkage, Flow	0.0010 - 0.0040 cm/cm	0.0010 - 0.0040 in/in	Internal Method

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	190 MPa	27600 psi	ISO 527-2
Elongation at Break	2.0 %	2.0 %	ISO 527-2
Tensile Modulus	11.5 GPa	1670 ksi	ISO 527-2
Flexural Strength	285 MPa	41300 psi	ISO 178
Flexural Modulus	11.5 GPa	1670 ksi	ISO 178

Mechanical Properties	Metric	English	Comments
	4.60 J/cm	8.62 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	18.0 µm/m-°C	10.0 µin/in-°F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	230 °C	446 °F	Unannealed; ISO 75-2/A
Flammability, UL94	HB	HB	UL 94
Oxygen Index	25 %	25 %	ISO 4589-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Dielectric Constant	3.9 @Frequency 110 Hz	3.9 @Frequency 110 Hz	IEC 60250
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.010 @Frequency 110 Hz	0.010 @Frequency 110 Hz	IEC 60250
Comparative Tracking Index	400 V	400 V	IEC 60112

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	250 - 260 °C	482 - 500 °F	
Front Barrel Temperature	260 - 290 °C	500 - 554 °F	
Melt Temperature	280 °C	536 °F	
Mold Temperature	120 - 140 °C	248 - 284 °F	
Drying Temperature	120 °C	248 °F	
Dry Time	0.500 - 1.50 hour	0.500 - 1.50 hour	

Descriptive Properties	Value	Comments
Appearance	Black	
	Colors Available	
	Natural Color	

Automotive Specifications Descriptive Properties	ASTM D6779 PA111G30 Value	Comments
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Good Chemical Resistance	
	Good Creep Resistance	
	Good Dimensional Stability	
	High Flow	
	High Stiffness	
	High Strength	
	Low Moisture Absorption	
	Outstanding Surface Finish	
Forms	Pellets	
Generic	PARA	
Injection Rate	Fast	
Processing Method	Injection Molding	
RoHS Compliance	RoHS Compliant	
Uses	Appliance Components	
	Appliances	
	Automotive Applications	
	Automotive Electronics	
	Automotive Exterior Parts	
	Automotive Interior Parts	
	Automotive Under the Hood	
	Bushings	
	Camera Applications	

Descriptive Properties	Value	Comments
	Electrical Housing	
	Electrical/Electronic Applications	
	Furniture	
	Gears	
	Industrial Applications	
	Machine/Mechanical Parts	
	Metal Replacement	
	Power/Other Tools	

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