

Solvay Specialty Polymers Ixef® 1524 Polyarylamide (PARA) (Unverified Data**)

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

Material Notes:

Ixef 1524 is a 50% glass-fiber reinforced, halogen-free flame retardant polyarylamide which exhibits high strength and stiffness, good surface gloss, and excellent creep resistance. - Black: Ixef 1524/9008 - Custom Colorable
Injection Notes: Hot Runners: 250°C to 260°C (482°F to 500°F) Injection Pressure: rapid
Drying This resin should be dried to a target moisture content of less than 0.10%. When using a desiccant air dryer with dew point of -28°C (-18°F) or lower, these guidelines can be followed: 1-2 hours at 120°C (248°F), 2-4 hours at 100°C (212°F), or 2-8 hours at 80°C (176°F). Injection Molding IXEF 1524 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 270°C (518°F), and the barrel temperatures should be around 250°C to 260°C (482°F to 500°F) in the rear zone, gradually increasing to 260°C to 275°C (500°F to 527°F) in the front zone. If hot runners are used, they should be set to 250°C to 260°C (482°F to 500°F). To maximize crystallinity, the temperature of the mold cavity surface must be held between 120°C and 140°C (248°F 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%). Data is presented for dry polymer unless noted as 'conditioned'. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Ixef-1524-Polyarylamide-PARA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.68 g/cc	0.0607 lb/in ³	ISO 1183
Filler Content	50 %	50 %	Glass Fiber Reinforcement
Water Absorption	0.30 % @Temperature 23.0 °C, Time 86400 sec	0.30 % @Temperature 73.4 °F, Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	1.0 %	1.0 %	65% RH; Internal Method
	1.3 %	1.3 %	65% RH; Internal Method
Linear Mold Shrinkage, Flow	0.0010 - 0.0030 cm/cm	0.0010 - 0.0030 in/in	Internal Method

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	230 MPa	33400 psi	ISO 527-2
Elongation at Break	1.9 %	1.9 %	ISO 527-2
Tensile Modulus	20.0 GPa	2900 ksi	ISO 527-2
Flexural Strength	240 MPa	34800 psi	Conditioned; ISO 178

Mechanical Properties	Metric ^{MPa}	English ^{ksi}	Comments
Flexural Modulus	15.5 GPa	2250 ksi	Conditioned; ISO 178
	18.5 GPa	2680 ksi	ISO 178
Charpy Impact Unnotched	4.80 J/cm ²	22.8 ft-lb/in ²	ISO 179/1eU
Charpy Impact, Notched	0.930 J/cm ²	4.43 ft-lb/in ²	ISO 179/1eA

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	227 °C	441 °F	Unannealed; ISO 75-2/A
Flammability, UL94	V-0 @Thickness 0.400 mm	V-0 @Thickness 0.0157 in	All Colors; UL 94
Oxygen Index	37 %	37 %	ISO 4589-2
Glow Wire Test	775 °C @Thickness 0.400 mm	1430 °F @Thickness 0.0157 in	Glow Wire Ignition Temperature; IEC 60695-2-13
	800 °C @Thickness 0.750 mm	1470 °F @Thickness 0.0295 in	Glow Wire Ignition Temperature; IEC 60695-2-13
	825 °C @Thickness 1.50 mm	1520 °F @Thickness 0.0591 in	Glow Wire Ignition Temperature; IEC 60695-2-13
	850 °C @Thickness 3.00 mm	1560 °F @Thickness 0.118 in	Glow Wire Ignition Temperature; IEC 60695-2-13

Electrical Properties	Metric	English	Comments
Dielectric Constant	4.44 @Frequency 2.40e+9 Hz	4.44 @Frequency 2.40e+9 Hz	Method B; ASTM D2520
Dissipation Factor	0.012 @Frequency 2.40e+9 Hz	0.012 @Frequency 2.40e+9 Hz	Method B; ASTM D2520
High Voltage Arc Resistance to Ignition (HVAR)	>= 300 sec @Thickness 3.00 mm	>= 300 sec @Thickness 0.118 in	PLC 0; UL 746
Comparative Tracking Index	>= 600 V	>= 600 V	IEC 60112
	>= 600 V @Thickness 3.00 mm	>= 600 V @Thickness 0.118 in	UL 746

Electrical Properties	Metric	English	Comments
	@Thickness 3.00 mm	@Thickness 0.118 in	PLC 0; UL 746
Hot Wire Ignition, HWI	60 - 120 sec	60 - 120 sec	PLC 1; UL 746
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	95 sec	95 sec	UL 746
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	>= 120 sec	>= 120 sec	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	>= 120 sec	>= 120 sec	PLC 0; UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	>= 120 sec	>= 120 sec	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 sec	>= 120 sec	PLC 0; UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 sec	>= 120 sec	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
	>= 120 sec	>= 120 sec	PLC 0; UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	37.6 arcs	37.6 arcs	UL 746
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	30 - 60 arcs	30 - 60 arcs	PLC 2; UL 746
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	30 - 60 arcs	30 - 60 arcs	PLC 2; UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	53.6 arcs	53.6 arcs	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	70.2 arcs	70.2 arcs	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	60 - 120 arcs	60 - 120 arcs	PLC 1; UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	60 - 120 arcs	60 - 120 arcs	

Electrical Properties	Metric	English	PLC 1: UL 746 Comments
	95.4 arcs @Thickness 3.00 mm	95.4 arcs @Thickness 0.118 in	UL 746
High Voltage Arc-Tracking Rate, HVTR	0.000 - 10.0 mm/min @Thickness 3.00 mm	0.000 - 0.394 in/min @Thickness 0.118 in	PLC 0; UL 746

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	100 °C	212 °F	
Dry Time	1.00 - 3.00 hour	1.00 - 3.00 hour	

Descriptive Properties	Value	Comments
Additive	Flame Retardant	
Appearance	Black	
	Colors Available	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Bromine Free	
	Flame Retardant	
	Good Chemical Resistance	
	Good Creep Resistance	
	Good Dimensional Stability	
	Halogen Free	

Descriptive Properties	High Flow Value	Comments
	High Strength	
	Low Moisture Absorption	
	Outstanding Surface Finish	
	Ultra High Stiffness	
Forms	Pellets	
Generic	PARA	
Processing Method	Injection Molding	
RoHS Compliance	RoHS Compliant	
Uses	Cell Phones	
	Electrical/Electronic Applications	
	Housings	

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