

## Solvay Specialty Polymers Ixef® 1022 Polyarylamide (PARA) (Unverified Data\*\*)

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

### Material Notes:

Ixef 1022 is a 50% glass-fiber reinforced, general purpose polyarylamide compound which exhibits very high strength and rigidity, outstanding surface gloss, and excellent creep resistance. Ixef 1022/0006 (natural) and Ixef 1022/9006 (black) are in compliance with ISO 10993 for limited exposure (less than 24 hours) medical applications. Ixef resin is well-suited for applications involving contact with cold water. Ixef 1022 is approved for food contact meeting European standard 10/2011/EC for both black (Ixef 1022/9006) and natural (Ixef 1022/0006). Ixef 1022 also meets the following European water approval standards: French positive list (FPL): Ixef 1022/0006 (natural) and Ixef 1022/0008 (natural); KTW (cold water only): Ixef 1022/0006 (natural) and Ixef 1022/9006 (black); ACS: Ixef 1022/9006 (black). - Black: 1022/9006 (ISO 10993 compliant) and Ixef 1022/9008 - Natural: 1022/0006 (ISO 10993 compliant) and Ixef 1022/0008 - Other Colors Available - Custom Colorable

**Injection Notes:** Hot runners: 250°C to 260°C (482°C 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 1022 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 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%). 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-1022-Polyarylamide-PARA-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Ixef-1022-Polyarylamide-PARA-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.64 g/cc	0.0592 lb/in <sup>3</sup>	ISO 1183
Filler Content	50 %	50 %	Glass Fiber Reinforcement
Water Absorption	0.16 % @Temperature 23.0 °C, Time 86400 sec	0.16 % @Temperature 73.4 °F, Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	1.5 %	1.5 %	65% RH; Internal Method
Linear Mold Shrinkage	0.0010 - 0.0030 cm/cm	0.0010 - 0.0030 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	260 MPa	37700 psi	Conditioned; ISO 527-2

Mechanical Properties	Metric	English	Comments
Elongation at Break	1.9 %	1.9 %	ISO 527-2
	2.2 %	2.2 %	Conditioned; ISO 527-2
Tensile Modulus	20.0 GPa	2900 ksi	Conditioned; ISO 527-2
	20.0 GPa	2900 ksi	ISO 527-2
Flexural Strength	400 MPa	58000 psi	ISO 178
Flexural Modulus	19.0 GPa	2760 ksi	ISO 178
Izod Impact, Notched	1.10 J/cm	2.06 ft-lb/in	ASTM D256
	8.50 J/cm	15.9 ft-lb/in	ASTM D256
Charpy Impact Unnotched	7.00 J/cm <sup>2</sup>	33.3 ft-lb/in <sup>2</sup>	ISO 179
Charpy Impact, Notched	1.10 J/cm <sup>2</sup>	5.23 ft-lb/in <sup>2</sup>	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	15.0 µm/m-°C	8.33 µin/in-°F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	230 °C	446 °F	Unannealed; ISO 75-2/A
UL RTI, Electrical	130 °C	266 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical with Impact	90.0 °C	194 °F	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	105 °C	221 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	105 °C	221 °F	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	120 °C	248 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	HB	HB	UL 94
Oxygen Index	25 %	25 %	ISO 4589-2

Electrical Properties	Metric	English	Comments
Volume Resistivity			IEC 60093

Electrical Properties	1.00e+13 ohm-cm Metric	1.00e+13 ohm-cm English	Comments
Dielectric Constant	4.6 @Frequency 110 Hz	4.6 @Frequency 110 Hz	IEC 60250
Dielectric Strength	31.0 kV/mm	787 kV/in	IEC 60243-1
Dissipation Factor	0.017 @Frequency 110 Hz	0.017 @Frequency 110 Hz	IEC 60250
Comparative Tracking Index	570 V	570 V	IEC 60112
	400 - 600 V @Thickness 3.00 mm	400 - 600 V @Thickness 0.118 in	PLC 1; UL 746
Hot Wire Ignition, HWI	>= 120 sec @Thickness 1.50 mm	>= 120 sec @Thickness 0.0591 in	PLC 0; UL 746
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 1.50 mm	>= 120 arcs @Thickness 0.0591 in	PLC 0; 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	
Nozzle 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
Agency Ratings	ACS Unspecified Rating	Black only
	EU No 10/2011	
	ISO 10993	
	ISO 10993-Part 1	

Cold Water Only

Descriptive Properties	KTW Unspecified Rating Value	Comments
Appearance	Black	
	Colors Available	
	Natural Color	
Automotive Specifications	ASTM D6779 PA111G50	
	BOSCH N28 BN05-OX1 BN0508-GF50-3Anf08SO Color: 0008 Natural	
	BOSCH N28 BN05-OX1 BN0508-GF50-3Asw01SO Color: 9008 Black	
	GM GM7001M PAMXD6(A4,A22,A64,BA651,G30,MS1700,NS335) Color: 9008 Black	
	GM GM7001M PAMXD6(A4,A22,A64,BA751,G30,MS1700,NS350) Color: NT Natural	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Biocompatible	
	E-beam Sterilizable	
	Ethylene Oxide Sterilizable	
	General Purpose	
	Good Chemical Resistance	
	Good Creep Resistance	
	Good Dimensional Stability	
	Good Sterilizability	
	High Flow	
	High Strength	
	Low Moisture Absorption	
	Outstanding Surface Finish	
	Radiation (Gamma) Resistant	
Radiation Sterilizable		

Descriptive Properties	Value <b>translucent</b>	Comments
	Ultra High Stiffness	
Forms	Pellets	
Generic	PARA	
Injection Rate	Fast	
Processing Method	Injection Molding	
RoHS Compliance	RoHS Compliant	
Uses	Appliances	
	Automotive Applications	
	Automotive Interior Parts	
	Cell Phones	
	Dental Applications	
	Food Service Applications	
	Furniture	
	High Gloss Applications	
	Hospital Goods	
	Medical Appliances	
	Medical/Healthcare Applications	
	Sporting Goods	
	Surgical Instruments	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China