

SOLVAY

Ixef[®] 1622 polyarylamide

lxef 1622 is an impact modified, 50% glass-fiber reinforced polyarylamide. which exhibits very high strength and rigidity, outstanding surface gloss, and excellent impact resistance.

- Natural: Ixef 1622/0003
- Black: lxef 1622/9003
- Custom Colorable

General				
Material Status	Commercial: Active			
Availability	 Africa & Middle East Asia Pacific	EuropeNorth America	• Sol	uth America
Filler / Reinforcement	 Glass Fiber Reinforcement, 	50% Filler by Weight		
Additive	 Impact Modifier 			
Features	Good Chemical ResistanceGood Creep ResistanceGood Dimensional Stability	High FlowHigh StiffnessHigh Strength	ImpLowOut	act Modified v Moisture Absorption standing Surface Finish
Uses	 Appliance Components Appliances Automotive Applications Automotive Electronics Business Equipment Camera Applications 	 Electrical Housing Electrical/Electronic Applications Furniture Gears Housings Industrial Applications 	 Law Equ Mac Met Pov 	vn and Garden uipment chine/Mechanical Parts tal Replacement wer/Other Tools
RoHS Compliance	 RoHS Compliant 			
Appearance	• Black	Colors Available	 Nat 	ural Color
Forms	Pellets			
Processing Method	 Injection Molding 			
Physical	Dr	y Conditioned	I Unit	Test Method
Density	1.6	0	g/cm ³	ISO 1183
Molding Shrinkage - Flow ¹	0.10 to 0.3	0	%	Internal Method
Water Absorption				
23°C, 24 hr	0.1	9	%	ISO 62
Equilibrium, 65% RH	1.	5	%	Internal Method
Mechanical	Dr	y Conditioned	l Unit	Test Method
Tensile Modulus	1700	0 16000) MPa	ISO 527-2
Tensile Stress				ISO 527-2
Yield	-	200) MPa	
Break	23		MPa	
Tensile Strain (Break)	2.	6 2.7	%	ISO 527-2
Flexural Modulus	1700		MPa	ISO 178
Flexural Strength	36	.0	MPa	ISO 178
Impact	Dr	y Conditioned	l Unit	Test Method
Notched Izod Impact	12	0	J/m	ASTM D256
Unnotched Izod Impact	110	0	J/m	ASTM D256

Ixef[®] 1622

Thermal	Dry	Conditioned Unit	Test Method
Heat Deflection Temperature			ISO 75-2/A
1.8 MPa, Annealed	220	°C	
Electrical	Dry	Conditioned Unit	Test Method
Dielectric Constant ²			ASTM D2520
1 GHz	4.23		
2 GHz	4.27		
Dissipation Factor ²			ASTM D2520
1 GHz	0.0095		
2 GHz	0.0095		
Flammability	Dry	Conditioned Unit	Test Method
Flame Rating - UL ³	HB		UL 94
Oxygen Index	25	%	ISO 4589-2
Additional Information			

Dry

Unless otherwise specified, Typical Values are obtained from Dry (also called DAM, Dry as Molded) samples. For Conditioned data, samples are tested at 50% Relative Humidity.

Injection	Typical Value Unit
Drying Temperature	120 °C
Drying Time	0.50 to 1.5 hr
Rear Temperature	250 to 260 °C
Front Temperature	260 to 280 °C
Processing (Melt) Temp	270 °C
Mold Temperature	120 to 140 °C
Injection Notes	

Hot Runners: 250°C to 260°C (482°F to 500°F) Injection Pressure: rapid

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 1622 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 280°C (500°F to 536°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%).

SOLVAY

Isothermal Stress vs. Strain (ISO 11403-1)



Secant Modulus vs. Strain (ISO 11403-1)





Notes

Typical properties: these are not to be construed as specifications.

¹ Solvay Internal procedure, Pressure 750 bars (10.9 kpsi); specimen 40 mm x 20 mm x 2-4 mm. (1.6 in. x 0.8 in. x 0.08-0.16 in.)

² Method B

³ These flammability ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

Ixef® 1622



For assistance with an emergency involving products of Solvay Advanced Polymers, such as a spill, leak, fire, or explosion, call day or night:

Emergency Health Information

USA +1.800.621.4590 International +1.770.772.8577

Emergency Spill Information

USA +1.800.424.9300 / +1.703.527.3887 (CHEMTREC) Europe +44 208.762.8322 (CARECHEM) China +86.10.5100.3039 All other Asian countries +65.633.44.177 For additional product information, technical assistance, and Material Safety Data Sheets (MSDS), call:

USA + 1.800.621.4557/ +1.770.772.8760 Europe +49.211.5135.9000 Japan +81.3.5425.4300 China & Southeast Asia +86.21.5080.5080

World Headquarters Solvay Advanced Polymers, L.L.C. 4500 McGinnis Ferry Road Alpharetta, GA 30005 USA +1.800.621.4557 (U.S.A.) +1.770.772.8760





MORE PLASTICS WITH MORE PERFORMANCE™

Solvay Advanced Polymers has many locations around the world. Please visit our website for the office nearest you, or email advancedpolymers@solvay.com for assistance. www.solvayadvancedpolymers.com

Material Safety Data Sheets (MSDS) for products of Solvay Advanced Polymers are available upon request from your sales representative or by emailing us at advancedpolymers@solvay.com. Always consult the appropriate MSDS before using any of our products.

Property values for individual batches will vary within specification limits. Unless otherwise noted, values shown are typical for uncolored resin; colorants may alter values. For Preliminary Data Sheets, values are typical of limited production and specifications are not yet established.

To our actual knowledge, the information contained herein is accurate as of the date of this document. However, neither Solvay Advanced Polymers, LLC nor any of it's affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this information or its use. Only products designated as part of the Solviva® family of biomaterials may be considered as candidates for implantable medical devices; Solvay Advanced Polymers does not allow or support the use of any other products in any implant applications. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product resides on the determination of the customer not Solvay Advanced Polymers. The customer must determine suitability of any information or material for any contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes. Solvay Advanced Polymers

All trademarks and registered trademarks are the property of Solvay Advanced Polymers, LLC, an affiliate of Solvay SA. © 2010 Solvay Advanced Polymers, LLC. All rights reserved.