Ixef® 1038
polyarylamide

Ixef® 1038 is a 30% glass-fiber reinforced polyarylamide compound which exhibits high strength and rigidity, outstanding surface finish, and excellent creep resistance.

- Black: Ixef® 1038 BK000
- Grey: Ixef® 1038 GY001
- Custom colorable

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight	
Features	• Chemical Resistant • Creep Resistant • Good Dimensional Stability • High Flow	• High Stiffness • High Strength • Low Moisture Absorption • Outstanding Surface Finish
Uses	• Appliance Components • Appliances • Automotive Applications • Automotive Electronics • Automotive Exterior Parts • Automotive Interior Parts • Automotive Under the Hood • Bushings • Camera Applications	• Cell Phones • Electrical Housing • Electrical/Electronic Applications • Furniture • Gears • Industrial Applications • Machine/Mechanical Parts • Metal Replacement • Power/Other Tools
RoHS Compliance	• RoHS Compliant	
Appearance	• Black • Colors Available	• Grey
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Typical Value	Unit	Test method
Density	1.42	g/cm³	ISO 1183
Molding Shrinkage - Flow	0.10 to 0.40	%	Internal Method
Water Absorption (24 hr, 23°C)	0.30	%	ISO 62

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	13000	MPa	ISO 527-1
Tensile Stress (Break)	230	MPa	ISO 527-2
Tensile Strain (Break)	2.5	%	ISO 527-2
Flexural Modulus	11000	MPa	ISO 178
Flexural Stress	320	MPa	ISO 178

Impact	Typical Value	Unit	Test method
Notched Izod Impact Strength	10	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength	40	kJ/m²	ISO 180

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ISO 75-2/A
1.8 MPa, Unannealed	230	°C	

Electrical	Typical Value	Unit	Test method
Dielectric Constant (2.40 GHz)	3.50		ASTM D2520
Dissipation Factor (2.40 GHz)	0.010		ASTM D2520

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 290	°C
Processing (Melt) Temp	280 to 300	°C
Mold Temperature	120 to 140	°C
Injection Rate	Fast	

Injection Notes

Hot runners: 250°C to 260°C (482°F to 500°F)

Storage

- Ixef® 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 Ixef® resins be dried prior to molding following the recommendations found in this datasheet and/or in the Ixef® processing guide.

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® 1038 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 to 300°C (536°F to 572°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%).

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

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Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

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