Ixef® GS-5022
polyarylamide

Ixef® GS-5022 is a 50% glass-fiber reinforced, PTFE modified grade of polyarylamide (PARA). It offers superior wear and friction properties, superior strength and stiffness combined with outstanding surface glass and exceptional flow and is well suited for medical applications such as structural device housings.

- Grey: GS-5022 GY01

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight	
Features	• Biocompatible • Chemical Resistant • Creep Resistant • E-beam Sterilizable • Ethylene Oxide Sterilizable • Good Dimensional Stability • Good Sterilizability • High Flow	• High Stiffness • High Strength • Low Friction • Low Moisture Absorption • Outstanding Surface Finish • Radiation Sterilizable • Wear Resistant
Uses	• Hospital Goods • Medical Devices	• Medical/Healthcare Applications
RoHS Compliance	• Contact Manufacturer	
Appearance	• Grey	
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Typical Value	Unit	Test method
Density	1.90	g/cm³	ISO 1183
Molding Shrinkage	0.20 to 0.40	%	Internal Method
Moisture Absorption - Equilibrium, 50% RH (23°C)	0.88	%	ISO 1110

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	22000	MPa	ISO 527-1
Tensile Stress (Break)	230	MPa	ISO 527-2
Tensile Strain (Break)	1.5	%	ISO 527-2
Flexural Modulus	20000	MPa	ISO 178
Flexural Stress	330	MPa	ISO 178

Impact	Typical Value	Unit	Test method
Notched Izod Impact Strength	45	kJ/m²	ISO 180

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

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
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: 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 GS-5022 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%).

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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