Ixef® HC-1022

Polyarylamide

Solvay Specialty Polymers

Message:

Ixef® HC-1022 is a 50% glass-fiber reinforced, general purpose polyarylamide compound that exhibits very high strength and rigidity, outstanding surface gloss, and excellent creep resistance.
Ixef® HC-1022 shows no evidence of cytotoxicity, sensitization, intracutaneous reactivity or systemic toxicity based on biocompatibility testing as defined by ISO 10993:1. Solvay offers these materials for healthcare applications that require limited exposure (less than 24 hours) to the body
Black: HC-1022 BK 000
Natural: HC-1022 NT 000
Gray: HC-1022 GY51
Additional colors available
Custom colorable

General Information	
UL YellowCard	E95746-101887930
Filler / Reinforcement	Glass fiber reinforced material, 50% filler by weight
Features	Super rigidity Good dimensional stability Excellent appearance Low hygroscopicity Electron beam disinfection Radioactive permeable Radiation disinfection High strength Good disinfection Ethylene oxide disinfection Anti-gamma radiation Good creep resistance High liquidity Good chemical resistance Biocompatibility General
Uses	Highlight applications Surgical instruments Dental application field Medical/nursing supplies Medical equipment Medical devices
Agency Ratings	ISO 10993
RoHS Compliance	RoHS compliance

Appearance	Black Grey Available colors Natural color
Forms	Particle
Processing Method	Injection molding

Physical	Dry	Conditioned	Unit	Test Method
Density	1.64	--	g/cm³	ISO 1183
Molding Shrinkage	0.10 - 0.30	--	%	ISO 294-4
Water Absorption (23°C, 24 hr)	0.16	--	%	ISO 62
Water absorption-Equil, 65% RH	1.50	--		Internal method
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	19500	19500	MPa	ISO 527-2
Tensile Stress (Break)	280	260	MPa	ISO 527-2
Tensile Strain (Break)	1.9	2.2	%	ISO 527-2
Flexural Modulus	18500	--	MPa	ISO 178
Flexural Stress	380	--	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Notched Izod Impact	110	--	J/m	ASTM D256
Unnotched Izod Impact	850	--	J/m	ASTM D256
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature (1.8 MPa, Unannealed)	230	--	°C	ISO 75-2/A
CLTE - Flow	1.5E-5	--	cm/cm/°C	ISO 11359-2

Injection	Dry	Unit
Drying Temperature	120	°C
Drying Time	0.50 - 1.5	hr
Rear Temperature	250 - 260	°C
Front Temperature	260 - 290	°C
Nozzle Temperature	260 - 290	°C
Processing (Melt) Temp	280	°C
Mold Temperature	120 - 140	°C
Injection Rate	Fast	
Injection instructions		

Hot runners: 250°C to 260°C (482°C to 500°F)StorageIxef® 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.DryingThe 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 MoldingIxef® HC-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%).

Recommended distributors for this material

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