Ixef® FC-1022

Polyarylamide

Solvay Specialty Polymers

Message:

Ixef® FC-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® FC-1022 is approved for food contact and meets FDA regulations for Ixef® FC-1022 NT 000 (natural) and Ixef® FC-1022 BK 000 (black) based on clearances granted by FCN 001242 for repeated use food contact applications with all food types, under FDA conditions of use B through H as described in Tables 1 and 2 of 21 CFR 176.170(c).

Black: FC-1022 BK 000

Natural: FC-1022 NT 000

General Information						
UL YellowCard		E95746-101810229				
Filler / Reinforcement		Glass fiber reinforced material, 50% filler by weight				
Features		Super rigidity				
		Good dimensional stability				
		Excellent appearance				
		Low hygroscopicity				
		High strength				
		Good disinfection				
		Good creep resistance				
		High liquidity				
		Good chemical resistance				
		Compliance of Food Exposure				
		General				
Uses	Electrical appliances					
		Highlight applications				
		Food service sector				
		Medical equipment				
Agency Ratings		FDA 21 CFR 176.170(c) 3				
		Europe 10/1/2011 12:00:00 AM				
RoHS Compliance		RoHS compliance				
Appearance		Black				
		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
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
Additional Information	Dry	Conditioned		
Water absorption-Equil, 65% RH				
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)Storagelxef® 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 lxef® resins be dried prior to molding following the recommendations found in this datasheet and/or in the lxef® 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® FC-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 (530°F), and the barrel temperatures should be around 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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