Ixef® 1027

Polyarylamide

Solvay Specialty Polymers

Message:

Ixef® 1027 is a 50% glass-fiber reinforced, heat stabilized polyarylamide, which exhibits very high strength and rigidity, outstanding surface gloss, and excellent creep resistance.
Black: Ixef® 1027/9000
natural: Ixef® 1027/0008

General Information	
UL YellowCard	E95746-264543
Filler / Reinforcement	Glass fiber reinforced material, 50% filler by weight
Additive	heat stabilizer
Features	Super rigidity Good dimensional stability Excellent appearance Low hygroscopicity High strength Good creep resistance High liquidity Good chemical resistance Thermal Stability
Uses	Lawn and Garden Equipment Gear Electrical appliances Power/other tools Industrial application Machine/mechanical parts Home appliance components Furniture Metal substitution Application in Automobile Field Business equipment
RoHS Compliance	RoHS compliance
Appearance	Black
Forms	Particle
Processing Method	Injection molding
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1) Secant Modulus vs. Strain (ISO 11403-1)

Physical	Nominal Value	Unit	Test Method
Density	1.64	g/cm³	ISO 1183
Molding Shrinkage	0.10 - 0.30	%	Internal method
Water Absorption (23°C, 24 hr)	0.16	%	ISO 62
Water absorption-Equil, 65% RH	1.5	%	Internal method
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	20000	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	235	MPa	ISO 527-2
Tensile Strain (Break)	1.8	%	ISO 527-2
Flexural Modulus	18500	MPa	ISO 178
Flexural Stress (23°C)	360	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	90	J/m	ASTM D256
Unnotched Izod Impact	720	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (1.8 MPa, Annealed)	220	°C	ISO 75-2/A
CLTE - Flow	1.7E-5	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+13	ohms·cm	IEC 60093
Dielectric Strength	28	kV/mm	IEC 60243-1
Dielectric Constant (110 Hz)	4.60		IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating [1]	HB		UL 94
Oxygen Index	25	%	ISO 4589-2
Injection	**Nominal Value**	**Unit**	
Drying Temperature	120	°C	
Drying Time	0.50 - 1.5	hr	
Rear Temperature	250 - 260	°C	
Front 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°F 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 1027 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°C to 260°C (482°F to 500°F) in the rear zone, gradually increasing to 260°C to 290°C (500°F to 554°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%).

NOTE

1.	These flammability ratings do not represent the risk of these materials or any other materials in actual fire situations.

Recommended distributors for this material

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