

Xencor™ PPA LGF-1950 HS polyphthalamide

Xencor™ PPA LGF-1950 HS is 50% long glass fiber reinforced, easy-flowing PPA which can be processed on most injection molding machines.

This material achieves extremely high mechanical and thermal properties, in combination with ease of processing and fast cycle times. It exhibits high strength, stiffness and impact strength at high

temperatures; excellent creep and fatigue resistance; isotropic mechanical properties and reduced anisotropic shrinkage; high shear strength and high burst pressure; and an excellent surface finish.

- Black: Xencor™ PPA LGF-1950 HS BK 545-9
- Natural: Xencor™ PPA LGF-1950 HS NT-9

General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Long Glass Fiber, 50% Filler by Weight	
Features	• Creep Resistant • Electrically Insulating • Fatigue Resistant • High Impact Resistance	• High Temperature Stiffness • Low CLTE • Low Shrinkage • Low Warpage
Uses	• Aircraft Applications • Automotive Applications	• Consumer Applications • Industrial Applications
RoHS Compliance	• RoHS Compliant	
Appearance	• Black	• Natural Color
Forms	• Pellets	
Processing Method	• Compression Molding • Injection Molding	• Overmolding

Physical	Dry	Conditioned	Unit	Test method
Density	1.61	--	g/cm ³	ISO 1183
Molding Shrinkage	0.25	--	%	Internal Method
Water Absorption (Equilibrium, 23°C, 50% RH)	0.80	--	%	ISO 62

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polyphthalamide

Mechanical	Dry	Conditioned	Unit	Test method
Tensile Modulus				ISO 527-1
23°C	18500	18300	MPa	
90°C	16500	--	MPa	
120°C	10500	--	MPa	
Tensile Stress				ISO 527-2
Break, 23°C	275	260	MPa	
Break, 90°C	210	--	MPa	
Break, 120°C	135	--	MPa	
Tensile Strain (Break)	2.0	2.0	%	ISO 527-2
Flexural Modulus (23°C)	17500	--	MPa	ISO 178
Flexural Stress	410	--	MPa	ISO 178

Impact	Dry	Conditioned	Unit	Test method
Charpy Notched Impact Strength				ISO 179
-30°C	32	--	kJ/m ²	
23°C	32	32	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-30°C	95	--	kJ/m ²	
23°C	95	85	kJ/m ²	

Thermal	Dry	Conditioned	Unit	Test method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	300	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	285	--	°C	ISO 75-2/A
Thermal Conductivity	0.35	--	W/m/K	ISO 22007
Coefficient of Linear Thermal Expansion	2.0E-5	--	cm/cm/°C	ISO 7991

Electrical	Dry	Conditioned	Unit	Test method
Surface Resistivity	1.0E+13	--	ohms	ASTM D257
Dielectric Strength	35	--	kV/mm	IEC 60243-1
Comparative Tracking Index	600	--	V	IEC 60112

Injection	Dry	Unit
Drying Temperature	120	°C
Drying Time	4.0 to 8.0	hr
Suggested Max Moisture	0.030 to 0.060	%
Suggested Max Regrind	20	%
Rear Temperature	330 to 340	°C
Middle Temperature	340	°C
Front Temperature	340	°C
Nozzle Temperature	335 to 345	°C
Processing (Melt) Temp	< 345	°C
Mold Temperature	135 to 160	°C

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Injection Notes

Pre-Drying -- Since polyamides are hygroscopic materials as well as sensitive to moisture during processing, this product should always be pre-dried.

Regrind -- Regrind of highly filled thermoplastic materials, such as this material, should only be recycled with special care. The regrind content must never exceed 20% and only regrind of optimum quality should be used. In any case, part properties should be checked.

Notes

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

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