

Omnix® LF-4050 BK 000-9

high performance polyamide

Omnix® LF-4050 BK 000-9 is a 50% Long Glass Fiber reinforced, easy-flowing, heat stabilized HPPA with a very high flexural modulus. It exhibits unique stiffness/toughness combination, an excellent retention of properties in a wide temperature range as well as outstanding creep and fatigue resistance.

Omnix® LF-4050 BK 000-9 has a pellet length of 9mm and can be processed on most injection-molding machines.

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	• Hot Water Moldability • Low CLTE • Low Shrinkage • Low Warpage
Uses	• Aircraft Applications • Automotive Applications	• Consumer Applications • Industrial Applications
Appearance	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Dry	Conditioned	Unit	Test method
Density	1.59	--	g/cm ³	ISO 1183
Molding Shrinkage - Flow ¹	0.10	--	%	Internal Method
Water Absorption (Equilibrium, 23°C, 50% RH)	1.4	--	%	ISO 62

Mechanical	Dry	Conditioned	Unit	Test method
Tensile Modulus (23°C)	17500	17500	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	270	235	MPa	ISO 527-2
Tensile Strain (Break)	2.1	2.0	%	ISO 527-2
Flexural Modulus (23°C)	16000	--	MPa	ISO 178
Flexural Stress (23°C)	360	--	MPa	ISO 178

Impact	Dry	Conditioned	Unit	Test method
Charpy Notched Impact Strength (23°C)	35	35	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	95	95	kJ/m ²	ISO 179

Thermal	Dry	Conditioned	Unit	Test method
Heat Deflection Temperature				
0.45 MPa, Unannealed	260	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	255	--	°C	ISO 75-2/A

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Thermal	Dry	Conditioned	Unit	Test method
CLTE - Flow	2.0E-5	--	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.32	--	W/m/K	ISO 22007

Electrical	Dry	Conditioned	Unit	Test method
Electric Strength (2.00 mm)	35	--	kV/mm	IEC 60243-1
Comparative Tracking Index	600	--	V	IEC 60112
Surface Resistivity	1.0E+13	--	ohms/sq	ASTM D257

Additional Information

Conditioned • Conditioned data generated according to test method ISO 1110

Injection	Dry	Unit
Drying Temperature	80	°C
Drying Time	4.0 to 12	hr
Suggested Max Moisture	0.10	%
Suggested Max Regrind	20	%
Rear Temperature	280 to 300	°C
Middle Temperature	285 to 300	°C
Front Temperature	285 to 300	°C
Nozzle Temperature	285 to 300	°C
Processing (Melt) Temp	< 320	°C
Mold Temperature	80 to 140	°C

Injection Notes

Pre-Drying -- Since polyamides are hygroscopic materials as well as sensitive to moisture during processing, this product should always be pre-dried. Recommended drying time is 4 hours at 120°C in dry-air dryer.

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.

¹ Tested in accordance with S.O.P. methods



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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