

NILAMID® XS1 GF50

Polyamide

Nilit Plastics

Message:

SPECIALTY PARTIALLY AROMATIC POLYAMIDE BLEND

DEVELOPED AS ALTERNATIVE TO METAL

GOOD STIFFNESS AND TENSILE STRENGTH

VERY LOW WARPAGE

VERY GOOD CREEP RESISTANCE

EXCELLENT SURFACE QUALITY

HIGH DIMENSIONAL STABILITY

PERFORMANCE INDEPENDENT FROM ENVIRONMENTAL CONDITIONS

PARTIALLY AROMATIC PA, 50% GLASS FIBER REINFORCED, LOW WARPAGE

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 50% filler by weight		
Features		Low warpage		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.58	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Transverse flow: 23°C	0.40	--	%	ISO 294-4
Flow: 23°C	0.080	--	%	ISO 294-4
Water Absorption				ISO 62
23°C, 24 hr	0.60	--	%	ISO 62
Saturated, 23°C	4.2	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	15500	15000	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	225	205	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.3	2.8	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	11	--	kJ/m ²	ISO 179/1eA
23°C	13	14	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	95	--	kJ/m ²	ISO 179/1eU
23°C	100	95	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)				ISO 180/A
	13	15	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature ¹ (1.8 MPa, Unannealed)				ISO 75-2/A
	235	--	°C	

Continuous Use Temperature ²	120	--	°C	IEC 60216
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity ³	1.0E+13	--	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+14	--	ohms·cm	IEC 60093
Dielectric Strength (2.00 mm)	32	--	kV/mm	IEC 60243-1
Comparative Tracking Index (3.20 mm, Solution A)	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.40 mm	HB	--		UL 94
0.8 mm	HB	--		UL 94
1.6 mm	HB	--		UL 94
3.2 mm	HB	--		UL 94
NOTE				
1.	Method B			
2.	2000 hr			
3.	23°C			

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