

POLYNIL® P50 FI

Polyamide 66

Nilit Plastics

Message:

POLYNIL® P50 FI is an unreinforced Polyamide 66 (Nylon 66) for injection molding, UL listed V2.
This general pourpose 2.7 viscosity Polyamide 66 resin is internally lubricated.
POLYNIL® P50 FI is FDA compliant.

General Information			
UL YellowCard	E157173-224046		
Additive	Lubricant		
Features	Lubricated		
Agency Ratings	FDA Unspecified Rating		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.14	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow : 23°C	1.6	%	
Flow : 23°C	1.4	%	
Water Absorption			ISO 62
23°C, 24 hr	1.5	%	
Saturation, 23°C	8.5	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	3100	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	83.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield, 23°C	6.0	%	
Break, 23°C	50	%	
Flexural Modulus (23°C)	2900	MPa	ISO 178
Flexural Stress (23°C)	120	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.5	kJ/m²	
23°C	5.5	kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
23°C	No Break		
30°C	No Break		
Notched Izod Impact Strength			ISO 180/A
-30°C	4.5	kJ/m²	
23°C	5.5	kJ/m²	
Thermal	Nominal Value	Unit	Test Method

Heat Deflection Temperature			
0.45 MPa, Unannealed	225	°C	ISO 75-2/B
1.8 MPa, Unannealed	72.0	°C	ISO 75-2/A
Continuous Use Temperature ¹	85.0	°C	IEC 60216
Vicat Softening Temperature	240	°C	ISO 306/B
Ball Pressure Test			IEC 60695-10-2
125°C	Pass		
165°C	Pass		
Melting Temperature	258	°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity ²	1.0E+12	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	ohms·cm	IEC 60093
Electric Strength (2.00 mm)	18	kV/mm	IEC 60243-1
Comparative Tracking Index (3.20 mm, Solution A)	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 mm	V-2		
3.20 mm	V-2		
Glow Wire Flammability Index			IEC 60695-2-12
0.800 mm	750	°C	
3.20 mm	850	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.800 mm	775	°C	
3.20 mm	750	°C	
Oxygen Index	28	%	ISO 4589-2
Flammability ³	SE		FMVSS 302
NOTE			
1.	20000 hr		
2.	23°C		
3.	355x100x1mm		

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