

POLYNIL® P50 FL

Polyamide 66

Nilit Plastics

Message:

POLYNIL® P50 FL is an unreinforced nucleated Polyamide 66 (Nylon 66) for injection molding, UL listed V2.
This general pourpose 2.7 viscosity Polyamide 66 resin is designed for fast cycling.

General Information			
UL YellowCard	E157173-224047		
Additive	Lubricant		
	Nucleating Agent		
Features	Fast Molding Cycle		
	Lubricated		
	Nucleated		
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	1.2	%	
Flow : 23°C	1.0	%	
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)	3500	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	90.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield, 23°C	5.0	%	
Break, 23°C	30	%	
Flexural Modulus (23°C)	3100	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	5.0	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	4.7	kJ/m ²	
23°C	4.8	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	225	°C	ISO 75-2/B
1.8 MPa, Unannealed	78.0	°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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