

Nilit Polynil® P50L Externally Lubricated Nylon 66

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Unreinforced

Material Notes:

Description: Polynil P50L is a general purpose injection molding grade that is widely used for gears, bearings, fasteners, clips. It is also suited for monofilament extrusion. Key characteristics: Excellent flow Good toughness Good overall mechanical performance High elongation UL 94 V2 listed at 0.75 mm Information provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Polynil-P50L-Externally-Lubricated-Nylon-66.php

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in ³	ASTM D792
Water Absorption	1.5 %	1.5 %	24h in H ₂ O; sim. ISO 62
Water Absorption at Saturation	8.5 %	8.5 %	sim. ISO 62
Loss On Ignition	28 %	28 %	ASTM D2863
Viscosity Measurement	50	50	relative viscosity (formic acid); ASTM D789
Linear Mold Shrinkage, Flow	0.013 cm/cm	0.013 in/in	Nilit

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	81.01 MPa	11750 psi	ASTM D638
Elongation at Break	>= 40 %	>= 40 %	ASTM D638
Elongation at Yield	6.0 %	6.0 %	ASTM D638
Tensile Modulus	3.03 GPa	440 ksi	ASTM D638
Flexural Strength	120 MPa	17400 psi	ASTM D790
	30.0 MPa	4350 psi	ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Flexural Modulus	2.85 GPa	413 ksi	ASTM D790
	0.800 GPa	116 ksi	ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Izod Impact, Notched (ISO)	5.46 kJ/m ²	2.60 ft-lb/in ²	ASTM D256
	4.41 kJ/m ²	2.10 ft-lb/in ²	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Charpy Impact Unnotched Mechanical Properties	NB Metric	NB English	ISO 179 Comments
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179
	0.400 J/cm ²	1.90 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	245 °C	473 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	85.0 °C	185 °F	ASTM D648
Vicat Softening Point	240 °C	464 °F	49 N; ASTM D1525
	255 °C	491 °F	9.8 N; ASTM D1525
Flammability, UL94	V-2	V-2	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-2	V-2	
	@Thickness 0.800 mm	@Thickness 0.0315 in	

Electrical Properties	Metric	English	Comments
Dielectric Strength	18.0 kV/mm	457 kV/in	ASTM D149
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Comparative Tracking Index	>= 600 V	>= 600 V	UL 746

Descriptive Properties	Value	Comments
Heat Resistance - Ball Test	OK	at 125°C, IEC 309
	OK	at 165°C, IEC 309

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