

Nilit Nilamid B3 H G7 35% Glass Fiber Reinforced PA6

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 40% Glass Fiber Filled

Material Notes:

Description: Nilamid B3 H G7 is a general purpose, 35% glass fiber reinforced NYLON 6. It has high mechanical performance, and also excellent moldability. Its impact performance is outstanding, so it is often used in parts subjected to shock loads, like drill housings. Key characteristics: Good overall mechanical performanceEase of processingGood surface finishGood thermal performance up to 120°CGood overall chemical resistance against most solvents and detergentsInformation provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Nilamid-B3-H-G7-35-Glass-Fiber-Reinforced-PA6.php

Physical Properties	Metric	English	Comments
Density	1.41 g/cc	0.0509 lb/in ³	ASTM D792, ISO 1183
Water Absorption	0.90 %	0.90 %	23°C, 24h in H ₂ O; sim. ISO 62
Water Absorption at Saturation	5.5 %	5.5 %	sim. ISO 62
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	Euronil
Linear Mold Shrinkage, Transverse	0.0040 cm/cm	0.0040 in/in	Euronil

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	190 MPa	27600 psi	ISO 527, ASTM D638
Elongation at Break	3.0 %	3.0 %	ISO 527, ASTM D638
Tensile Modulus	11.0 GPa	1600 ksi	ISO 527, ASTM D638
Flexural Yield Strength	250 MPa	36300 psi	ISO 178, ASTM D790
	150 MPa	21800 psi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Flexural Modulus	10.0 GPa	1450 ksi	ISO 178, ASTM D790
	6.00 GPa	870 ksi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	13.0 kJ/m ²	6.19 ft-lb/in ²	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	5.50 J/cm ²	26.2 ft-lb/in ²	ISO 179

Mechanical Properties	Metric	English	Comments
	4.00 J/cm ²	15.0 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179
	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	105 °C	221 °F	20,000 hr; IEC 216
Deflection Temperature at 0.46 MPa (66 psi)	221 °C	430 °F	ISO 75, ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	212 °C	414 °F	ISO 75, ASTM D648
Vicat Softening Point	218 °C	424 °F	49 N; ISO 306, ASTM D1525
	222 °C	432 °F	9.8 N; ISO 306, ASTM D1525
Flammability, UL94	HB	HB	
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	HB	HB	
	@Thickness 3.20 mm	@Thickness 0.126 in	
Oxygen Index	23 %	23 %	ASTM D2863
Glow Wire Test	650 °C	1200 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	
	650 °C	1200 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 0.800 mm	@Thickness 0.0315 in	

Electrical Properties	Metric	English	Comments
Dielectric Strength	21.0 kV/mm	533 kV/in	ASTM D149
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Comparative Tracking Index	350 V	350 V	Sol. B; IEC 112, UL 746A
	@Thickness 3.20 mm	@Thickness 0.126 in	
	500 V	500 V	Sol. A; IEC 112, UL 746A
	@Thickness 3.20 mm	@Thickness 0.126 in	

Processing Properties	Metric	English	Comments
Nozzle Temperature	245 - 290 °C	473 - 554 °F	
Zone 1	240 - 270 °C	464 - 518 °F	hopper
Zone 2	240 - 270 °C	464 - 518 °F	
Zone 3	245 - 285 °C	473 - 545 °F	
Zone 4	245 - 290 °C	473 - 554 °F	
Melt Temperature	245 - 280 °C	473 - 536 °F	Do not melt above 310°C
Mold Temperature	90.0 - 110 °C	194 - 230 °F	Preferred
Drying Temperature	80.0 - 85.0 °C	176 - 185 °F	
Dry Time	4 hour	4 hour	
Injection Pressure	70.0 - 100 MPa	10200 - 14500 psi	

Descriptive Properties	Value	Comments
Clamping Force	in tons, 0.7 times the projected surface area in cm ²	
Flammability Rating	B50	FMVSS No. 302, 355x100x1 mm
Heat Resistance - Ball Test	OK	at 125°C, IEC 309
	OK	at 165°C, IEC 309
Holding Pressure	90 MPa	

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