

Nilit Nilamid B3 H G8 40% Glass Fiber Reinforced PA6

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

Material Notes:

Description: Nilamid B3 H G8 is a product that combines outstanding strength and stiffness with good moldability and good impact strength. It is widely used for structural applications. Key characteristics: High tensile strength High stiffness Easy processing Good heat stability up to 120°C Good surface finish Colorable Information provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Nilamid-B3-H-G8-40-Glass-Fiber-Reinforced-PA6.php

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 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	0.0025 cm/cm	0.0025 in/in	Euronil
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	Euronil

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	210 MPa	30500 psi	ISO 527, ASTM D638
Elongation at Break	2.0 %	2.0 %	ISO 527, ASTM D638
Tensile Modulus	14.0 GPa	2030 ksi	ISO 527, ASTM D638
Flexural Yield Strength	270 MPa	39200 psi	ISO 178, ASTM D790
	160 MPa @Temperature 90.0 °C	23200 psi @Temperature 194 °F	ISO 178, ASTM D790
Flexural Modulus	12.5 GPa	1810 ksi	ISO 178, ASTM D790
	6.80 GPa @Temperature 90.0 °C	986 ksi @Temperature 194 °F	ISO 178, ASTM D790
Izod Impact, Notched (ISO)	12.0 kJ/m ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	ISO 180/1A
	14.5 kJ/m ² @Temperature 23.0 °C	6.90 ft-lb/in ² @Temperature 73.4 °F	ISO 180/1A
Charpy Impact Unnotched	5.80 J/cm ²	27.6 ft-lb/in ²	ISO 179

Mechanical Properties	4.20 J/cm ² Metric	20.0 ft-lb/in ² English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.50 J/cm ²	7.14 ft-lb/in ²	ISO 179
	1.20 J/cm ²	5.71 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)	213 °C	415 °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	27 %	27 %	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
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Processing Properties	Metric	English	Comments
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	B45	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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