

## Nilit Nilamid B3 H G10 50% Glass Fiber Reinforced PA6

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 50% Glass Fiber Filled

### Material Notes:

Description: Nilamid B3 H G10 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-G10-50-Glass-Fiber-Reinforced-PA6.php](http://www.lookpolymers.com/polymer_Nilit-Nilamid-B3-H-G10-50-Glass-Fiber-Reinforced-PA6.php)

Physical Properties	Metric	English	Comments
Density	1.57 g/cc	0.0567 lb/in <sup>3</sup>	ASTM D792, ISO 1183
Water Absorption	0.80 %	0.80 %	23°C, 24h in H <sub>2</sub> O; sim. ISO 62
Water Absorption at Saturation	4.5 %	4.5 %	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	230 MPa	33400 psi	ISO 527, ASTM D638
Elongation at Break	2.0 %	2.0 %	ISO 527, ASTM D638
Tensile Modulus	16.0 GPa	2320 ksi	ISO 527, ASTM D638
Flexural Yield Strength	300 MPa	43500 psi	ISO 178, ASTM D790
	180 MPa @Temperature 90.0 °C	26100 psi @Temperature 194 °F	ISO 178, ASTM D790
Flexural Modulus	15.0 GPa	2180 ksi	ISO 178, ASTM D790
	8.10 GPa @Temperature 90.0 °C	1170 ksi @Temperature 194 °F	ISO 178, ASTM D790
Izod Impact, Notched (ISO)	13.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	6.19 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 180/1A
	17.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	8.09 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 180/1A
Charpy Impact Unnotched	6.00 J/cm <sup>2</sup>	28.6 ft-lb/in <sup>2</sup>	ISO 179

Mechanical Properties	4.50 J/cm <sup>2</sup> Metric	21.4 ft-lb/in <sup>2</sup> English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.60 J/cm <sup>2</sup>	7.61 ft-lb/in <sup>2</sup>	ISO 179
	1.30 J/cm <sup>2</sup>	6.19 ft-lb/in <sup>2</sup>	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)	222 °C	432 °F	ISO 75, ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	215 °C	419 °F	ISO 75, ASTM D648
Vicat Softening Point	218 °C	424 °F	49 N; ISO 306, ASTM D1525
	223 °C	433 °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	24 %	24 %	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	245 - 290 °C Metric	473 - 554 °F 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 <sup>2</sup>	
Flammability Rating	B43	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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