

Celanese Nilit Nilamid B3 H G6 30% Glass Fiber Reinforced PA6

Categories: [Polymer](#); [Thermoplastic](#); [Nylon \(Polyamide PA\)](#); [Nylon 6 \(PA6\)](#); [Nylon 6, 30% Glass Fiber Filled](#)

Material Notes: **Description:** Nilamid B3 H G6 is a general purpose, 30% glass fiber reinforced NYLON 6 with a combination of good mechanical performance, impact strength and processability. It is one of the most widely used engineering plastics.



Key characteristics:


- 1 Good overall mechanical performance
- 1 Ease of processing
- 1 Good surface finish
- 1 Good thermal performance up to 120°C
- 1 Good overall chemical resistance against most solvents and detergents



Information provided by NILIT.

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.36 g/cc	0.0491 lb/in ³	ASTM D792, ISO 1183
Water Absorption	1.0 %	1.0 %	23°C, 24h in H ₂ O; sim. ISO 62
Water Absorption at Saturation	6.5 %	6.5 %	sim. ISO 62
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	Euronil
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	Euronil

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	180 MPa	26100 psi	ISO 527, ASTM D638
Elongation at Break	3.0 %	3.0 %	ISO 527, ASTM D638
Tensile Modulus	9.50 GPa	1380 ksi	ISO 527, ASTM D638
Flexural Yield Strength	230 MPa	33400 psi	ISO 178, ASTM D790
	140 MPa @Temperature 90.0 °C	20300 psi @Temperature 194 °F	ISO 178, ASTM D790
Flexural Modulus	8.70 GPa	1260 ksi	ISO 178, ASTM D790
	5.00 GPa @Temperature 90.0 °C	725 ksi @Temperature 194 °F	ISO 178, ASTM D790
Izod Impact, Notched (ISO) 	9.50 kJ/m ² @Temperature -30.0 °C	4.52 ft-lb/in ² @Temperature -22.0 °F	ISO 180/1A
	12.0 kJ/m ² @Temperature 23.0 °C	5.71 ft-lb/in ² @Temperature 73.4 °F	ISO 180/1A
Charpy Impact Unnotched	5.50 J/cm ²	26.2 ft-lb/in ²	ISO 179
	4.00 J/cm ² @Temperature -30.0 °C	19.0 ft-lb/in ² @Temperature -22.0 °F	ISO 179
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179
	0.900 J/cm ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	ISO 179

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

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)	210 °C	410 °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 @Thickness 0.800 mm	HB @Thickness 0.0315 in	
	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	
	HB @Thickness 3.20 mm	HB @Thickness 0.126 in	
Oxygen Index	23 %	23 %	ASTM D2863
Glow Wire Flammability Index 	650 °C @Thickness 3.20 mm	1200 °F @Thickness 0.126 in	IEC 694-2-12

	650 °C @Thickness 0.800 mm	1200 °F @Thickness 0.0315 in	IEC 694-2-12
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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

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		

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.