

Nilit Nilamid A3 H G6 General Purpose 30% Glass Reinforced PA66

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 30% Glass Fiber Filled

Material Notes:

Description: Nilamid A3 H G6 is a general purpose 30% glass fiber reinforced NYLON 66 that gives an excellent combination of tensile strength, stiffness and impact strength. It is one of the most widely used materials for structural applications. Key characteristics: Good overall mechanical performance Ease of processing Good surface finish Good thermal performance up to 140°C Good overall chemical resistance against most solvents and detergents Information provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Nilamid-A3-H-G6-General-Purpose-30-Glass-Reinforced-PA66.php

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/in ³	ASTM D792, ISO 1183
Water Absorption	0.70 %	0.70 %	23°C, 24h in H ₂ O; sim. ISO 62
Water Absorption at Saturation	5.0 %	5.0 %	sim. ISO 62
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	Euronil
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	Euronil

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	170 MPa	24700 psi	ISO 527, ASTM D638
Elongation at Break	2.5 %	2.5 %	ISO 527, ASTM D638
Flexural Yield Strength	260 MPa	37700 psi	ISO 178, ASTM D790
	160 MPa	23200 psi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Flexural Modulus	8.50 GPa	1230 ksi	ISO 178, ASTM D790
	5.50 GPa	798 ksi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	11.0 kJ/m ²	5.23 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
	4.00 J/cm ²	19.0 ft-lb/in ²	

Mechanical Properties	Metric	English	ISO 179 Comments
Charpy Impact, Notched	1.00 J/cm ²	4.76 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	115 °C	239 °F	20,000 hr; IEC 216
Deflection Temperature at 0.46 MPa (66 psi)	260 °C	500 °F	ISO 75, ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	250 °C	482 °F	ISO 75, ASTM D648
Vicat Softening Point	250 °C	482 °F	49 N; ISO 306, ASTM D1525
	255 °C	491 °F	9.8 N; ISO 306, ASTM D1525
Flammability, UL94	HB	HB	
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	HB	HB	
	@Thickness 3.20 mm	@Thickness 0.126 in	
Oxygen Index	26 %	26 %	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	280 - 295 °C	536 - 563 °F	
Zone 1	270 - 290 °C	518 - 554 °F	hopper
Zone 2	275 - 290 °C	527 - 554 °F	
Zone 3	280 - 295 °C	536 - 563 °F	
Zone 4	280 - 295 °C	536 - 563 °F	
Melt Temperature	275 - 300 °C	527 - 572 °F	Do not melt above 300°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	B30	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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