

Nilit Nilamid A3 H6 G5 25% Glass Reinforced PA66

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

Material Notes:

Description: Nilamid A3 H6 G5 is a 25% glass fiber reinforced NYLON 66 with a special stabilization system against hot oil and grease. As a result of this stabilization, the material has a brown natural color. It is used for applications which run in hot mineral oil, such as bearing cages, cam shafts and couplings. Because this material also demonstrates good hot air heat stability and has a low ionic content, it is also used for electrical applications such as bobbins. Key characteristics: Excellent heat stability and stability against hot oil and grease Good overall mechanical performance up to 150°C Brown natural color Easy processing Information provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Nilamid-A3-H6-G5-25-Glass-Reinforced-PA66.php

Physical Properties	Metric	English	Comments
Density	1.32 g/cc	0.0477 lb/in ³	ASTM D792, ISO 1183
Water Absorption	0.80 %	0.80 %	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	0.0035 cm/cm	0.0035 in/in	Euronil
Linear Mold Shrinkage, Transverse	0.0055 cm/cm	0.0055 in/in	Euronil

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	150 MPa	21800 psi	ISO 527, ASTM D638
Elongation at Break	3.0 %	3.0 %	ISO 527, ASTM D638
Flexural Yield Strength	230 MPa	33400 psi	ISO 178, ASTM D790
Flexural Modulus	7.80 GPa	1130 ksi	ISO 178, ASTM D790
	4.50 GPa	653 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 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	4.80 J/cm ²	22.8 ft-lb/in ²	ISO 179
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	130 °C	266 °F	20,000 hr; IEC 216

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (0.07 psi)	255 °C	481 °F	ISO 75, ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	248 °C	478 °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 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 0.800 mm	@Thickness 0.0315 in	
	650 °C	1200 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
Dielectric Strength	20.0 kV/mm	508 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

Processing Properties	Metric	English	Comments
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	
Heat Resistance - Ball Test	OK	at 125°C, IEC 309
	OK	at 165°C, IEC 309
Holding Pressure	90 Mpa	

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