

## Nilit Nilamid A3 H5 G6 30% Glass Reinforced PA66

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

### Material Notes:

Description: Nilamid A3 H5 G6 has an outstanding mechanical performance and is 30% glass fiber reinforced. It is stabilized against chemical attack from peroxides and other oxidizing substances. It is used extensively for valve bodies and other parts that are in contact with water in household appliances. Key characteristics: Good overall mechanical performance Ease of processing Good surface finish Good thermal performance up to 140°C UL 94 RTI listing 130°C, 0.73 mm Good overall chemical resistance against most solvents and detergents, special stabilization against peroxide Information provided by NILIT.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Nilit-Nilamid-A3-H5-G6-30-Glass-Reinforced-PA66.php](http://www.lookpolymers.com/polymer_Nilit-Nilamid-A3-H5-G6-30-Glass-Reinforced-PA66.php)

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/in <sup>3</sup>	ASTM D792, ISO 1183
Water Absorption	0.70 %	0.70 %	23°C, 24h in H <sub>2</sub> 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	3.0 %	3.0 %	ISO 527, ASTM D638
Tensile Modulus	10.0 GPa	1450 ksi	ISO 527, ASTM D638
Flexural Yield Strength	250 MPa	36300 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 <sup>2</sup>	3.81 ft-lb/in <sup>2</sup>	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	11.0 kJ/m <sup>2</sup>	5.23 ft-lb/in <sup>2</sup>	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.20 J/cm <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	ISO 179
	0.900 J/cm <sup>2</sup>	4.28 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	130 °C	266 °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	
	675 °C	1250 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	675 °C	1250 °F	Glow Wire Ignition Temperature; IEC 695-2-13
	@Thickness 3.20 mm	@Thickness 0.126 in	
	700 °C	1290 °F	Glow Wire Ignition Temperature; IEC 695-2-13
	@Thickness 0.800 mm	@Thickness 0.0315 in	

Electrical Properties	Metric	English	Comments
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Electrical Properties	21.0 kV/mm Metric	533 kV/in English	Comments
	@Thickness 2.00 mm	@Thickness 0.0787 in	
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

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 <sup>2</sup>	
Flammability Rating	B22	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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