

Nilit Nilamid A3 H ZE High Impact PA66

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Impact Grade

Material Notes:

Description: Nilamid A3 H ZE was developed for applications which are subjected to very high shock loads, also at minus temperatures. It has good impact performance, whilst maintaining good strength and stiffness. It is an easy to mould material, that can be supplied with a full spectrum of colors. Key characteristics: Good impact performance, also at minus temperatures Good thermal performance Good strength and stiffness Easy processing Available in a wide range of colors Information provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Nilamid-A3-H-ZE-High-Impact-PA66.php

Physical Properties	Metric	English	Comments
Density	1.07 g/cc	0.0387 lb/in ³	ASTM D792, ISO 1183
Water Absorption	0.90 %	0.90 %	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	0.013 cm/cm	0.013 in/in	Euronil
Linear Mold Shrinkage, Transverse	0.013 cm/cm	0.013 in/in	Euronil

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	50.0 MPa	7250 psi	ISO 527, ASTM D638
Elongation at Break	>= 80 %	>= 80 %	ISO 527, ASTM D638
Elongation at Yield	>= 10 %	>= 10 %	ISO 527, ASTM D638
Flexural Yield Strength	65.0 MPa	9430 psi	ISO 178, ASTM D790
	15.0 MPa	2180 psi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Flexural Modulus	1.80 GPa	261 ksi	ISO 178, ASTM D790
	0.300 GPa	43.5 ksi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Izod Impact, Notched (ISO)	25.0 kJ/m ²	11.9 ft-lb/in ²	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	90.0 kJ/m ²	42.8 ft-lb/in ²	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	NB	NB	ISO 179

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179
Charpy Impact, Notched	6.00 J/cm ²	28.6 ft-lb/in ²	ISO 179
	2.00 J/cm ²	9.52 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	65.0 °C	149 °F	20,000 hr; IEC 216
Deflection Temperature at 0.46 MPa (66 psi)	200 °C	392 °F	ISO 75, ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	60.0 °C	140 °F	ISO 75, ASTM D648
Vicat Softening Point	195 °C	383 °F	49 N; ISO 306, ASTM D1525
	250 °C	482 °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	20 %	20 %	ASTM D2863
Glow Wire Test	550 °C	1020 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	
	550 °C	1020 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 0.800 mm	@Thickness 0.0315 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	600 V	600 V	Sol. A; IEC 112, UL 746A
	@Thickness 3.20 mm	@Thickness 0.126 in	
	600 V	600 V	Sol. B; IEC 112, UL 746A
	@Thickness 3.20 mm	@Thickness 0.126 in	

Processing Properties	Metric	English	Comments
Nozzle Temperature	275 - 290 °C	527 - 554 °F	
Zone 1	265 - 285 °C	509 - 545 °F	hopper
Zone 2	270 - 285 °C	518 - 545 °F	
Zone 3	275 - 290 °C	527 - 554 °F	
Zone 4	275 - 290 °C	527 - 554 °F	
Melt Temperature	275 - 290 °C	527 - 554 °F	Do not melt above 300°C
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	80°C is 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	
Heat Resistance - Ball Test	OK	at 125°C, IEC 309
	OK	at 165°C, IEC 309
Holding Pressure	90 Mpa	

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