

Nilit Nilamid B3 H XB Unfilled, Impact Resistant PA6

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, Impact Grade

Material Notes:

Description: Nilamid B3 H XB is a high impact NYLON 6. The product has excellent impact properties above 0°C, combined with good maintaining mechanical characteristics. Application areas include automotive components and industrial components subjected to shock loads. Key characteristics: Good impact strength High elongation Good overall mechanical performance Excellent surface finish Information provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Nilamid-B3-H-XB-Unfilled-Impact-Resistant-PA6.php

Physical Properties	Metric	English	Comments
Density	1.08 g/cc	0.0390 lb/in ³	ASTM D792, ISO 1183
Water Absorption	2.0 %	2.0 %	23°C, 24h in H ₂ O; sim. ISO 62
Water Absorption at Saturation	8.5 %	8.5 %	sim. ISO 62
Linear Mold Shrinkage, Flow	0.014 cm/cm	0.014 in/in	Euronil
Linear Mold Shrinkage, Transverse	0.014 cm/cm	0.014 in/in	Euronil

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	60.0 MPa	8700 psi	ISO 527, ASTM D638
Elongation at Break	>= 50 %	>= 50 %	ISO 527, ASTM D638
Elongation at Yield	6.0 %	6.0 %	ISO 527, ASTM D638
Flexural Yield Strength	70.0 MPa	10200 psi	ISO 178, ASTM D790
Flexural Modulus	2.20 GPa	319 ksi	ISO 178, ASTM D790
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	15.0 kJ/m ²	7.14 ft-lb/in ²	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	NB	NB	ISO 179

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	85.0 °C	185 °F	20,000 hr; IEC 216
Vicat Softening Point	170 °C	338 °F	49 N; ISO 306, ASTM D1525

Thermal Properties	Metric	English	Comments
Flammability, UL94	@Thickness 0.800 mm	@Thickness 0.0315 in	
	HB	HB	
	@Thickness 3.20 mm	@Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
Dielectric Strength	18.0 kV/mm	457 kV/in	ASTM D149
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Comparative Tracking Index	550 V	550 V	Sol. B; IEC 112, UL 746A
	@Thickness 3.20 mm	@Thickness 0.126 in	
	600 V	600 V	Sol. A; IEC 112, UL 746A
	@Thickness 3.20 mm	@Thickness 0.126 in	

Processing Properties	Metric	English	Comments
Nozzle Temperature	240 - 270 °C	464 - 518 °F	
Zone 1	230 - 260 °C	446 - 500 °F	hopper
Zone 2	230 - 260 °C	446 - 500 °F	
Zone 3	240 - 270 °C	464 - 518 °F	
Zone 4	240 - 270 °C	464 - 518 °F	
Melt Temperature	240 - 280 °C	464 - 536 °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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