Nilit Nilamid B3 H ZC Unfilled, Low Temperature Impact Resistant PA6

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

Material Notes:

Description: Nilamid B3 H ZC has outstanding impact performance, even at minus temperatures. It is widely used for components subjected to high shock loads. Applications include bicycle components, garden equipment, components in the car interior and industrial machine components.Key characteristics: Outstanding impact strength, even at minus temperaturesHigh elongationEasy processingGood surface finish Information provided by NILIT.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Nilit-Nilamid-B3-H-ZC-Unfilled-Low-Temperature-Impact-Resistant-PA6.php

Physical Properties	Metric	English	Comments
Density	1.06 g/cc	0.0383 lb/in³	ASTM D792, ISO 1183
Water Absorption	2.0 %	2.0 %	23°C, 24h in H₂O; sim. ISO 62
Water Absorption at Saturation	8.0 %	8.0 %	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	55.0 MPa	7980 psi	ISO 527, ASTM D638
Elongation at Yield	>= 100 %	>= 100 %	ISO 527, ASTM D638
Flexural Yield Strength	75.0 MPa	10900 psi	ISO 178, ASTM D790
Flexural Modulus	1.70 GPa	247 ksi	ISO 178, ASTM D790
Izod Impact, Notched (ISO)	30.0 kJ/m² @Temperature -30.0 °C	14.3 ft-lb/in² @Temperature -22.0 °F	ISO 180/1A
	65.0 kJ/m² @Temperature 23.0 °C	30.9 ft-lb/in² @Temperature 73.4 °F	ISO 180/1A
Charpy Impact Unnotched	NB	NB	ISO 179
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179
Charpy Impact, Notched	5.00 J/cm²	23.8 ft-lb/in²	ISO 179
	2.20 J/cm² @Temperature -30.0 °C	10.5 ft-lb/in² @Temperature -22.0 °F	ISO 179

Mechanical Properties	Metric	English	Comments

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	80.0 °C	176 °F	20,000 hr; IEC 216
Deflection Temperature at 0.46 MPa (66 psi)	145 °C	293 °F	ISO 75, ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	53.0 °C	127 °F	ISO 75, ASTM D648
Vicat Softening Point	174 °C	345 °F	49 N; ISO 306, ASTM D1525
	208 °C	406 °F	9.8 N; ISO 306, ASTM D1525
Flammability, UL94	HB @Thickness 0.800 mm	HB @Thickness 0.0315 in	
	HB @Thickness 3.20 mm	HB @Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
Dielectric Strength	19.0 kV/mm @Thickness 2.00 mm	483 kV/in @Thickness 0.0787 in	ASTM D149
Comparative Tracking Index	550 V @Thickness 3.20 mm	550 V @Thickness 0.126 in	Sol. B; IEC 112, UL 746A
	600 V @Thickness 3.20 mm	600 V @Thickness 0.126 in	Sol. A; IEC 112, UL 746A

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	

Processing Properties	Metric	English	Comments
Injection Pressure	100 MPa	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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