

Nilit Nilamid B G6 FR C4 30% Glass Fiber Reinforced, Flame Retardant PA6

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 30% Glass Fiber Filled

Material Notes:

Description: Nilamid B G6 FR C4 combines excellent mechanical performance with flame retardancy. The halogenated flame retardant system used in this product allows a wide range of colors. This product does not contain the flame retardants mentioned in the WEEE directive (PBB or PBDE). The product is used widely throughout the electrical and appliance industries for applications like pressure switches, circuit breaker housings, contactors, timers and programmers. Key characteristics: UL listed V0 at 3.0 and 0.75 mm UL listed GWIT 825 °C and GWFI 960°C at 0.75 mm, compliant with IEC 60335-4 UL listed on CTI PCL 1 (CTI = 425 V) Excellent mechanical performance Colorable in light colors Easy processing Information provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Nilamid-B-G6-FR-C4-30-Glass-Fiber-Reinforced-Flame-Retardant-PA6.php

Physical Properties	Metric	English	Comments
Density	1.56 g/cc	0.0564 lb/in ³	ASTM D792, ISO 1183
Water Absorption	1.3 %	1.3 %	23°C, 24h in H ₂ O; sim. ISO 62
Water Absorption at Saturation	5.0 %	5.0 %	sim. ISO 62
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	Euronil
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	Euronil

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	130 MPa	18900 psi	ISO 527, ASTM D638
Elongation at Break	2.0 %	2.0 %	ISO 527, ASTM D638
Tensile Modulus	8.00 GPa	1160 ksi	ISO 527, ASTM D638
Flexural Yield Strength	190 MPa	27600 psi	ISO 178, ASTM D790
Flexural Modulus	8.60 GPa	1250 ksi	ISO 178, ASTM D790
	4.20 GPa	609 ksi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Izod Impact, Notched (ISO)	6.50 kJ/m ²	3.09 ft-lb/in ²	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	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	2.80 J/cm ²	13.3 ft-lb/in ²	ISO 179

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179
	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	120 °C	248 °F	20,000 hr; IEC 216
Deflection Temperature at 0.46 MPa (66 psi)	210 °C	410 °F	ISO 75, ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	192 °C	378 °F	ISO 75, ASTM D648
Vicat Softening Point	190 °C	374 °F	49 N; ISO 306, ASTM D1525
	210 °C	410 °F	9.8 N; ISO 306, ASTM D1525
Flammability, UL94	V-0	V-0	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-0	V-0	
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	V-0	V-0	
	@Thickness 3.20 mm	@Thickness 0.126 in	
Oxygen Index	33 %	33 %	ASTM D2863
Glow Wire Test	960 °C	1760 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	960 °C	1760 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
Dielectric Strength	21.0 kV/mm	533 kV/in	ASTM D149
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Comparative Tracking Index	275 V	275 V	Sol. B; IEC 112, UL 746A
	@Thickness 3.20 mm	@Thickness 0.126 in	
	425 V	425 V	Sol. A; IEC 112, UL 746A

Electrical Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
Processing Properties	Metric	English	Comments
Nozzle Temperature	245 - 275 °C	473 - 527 °F	
Zone 1	240 - 260 °C	464 - 500 °F	hopper
Zone 2	240 - 265 °C	464 - 509 °F	
Zone 3	240 - 270 °C	464 - 518 °F	
Zone 4	245 - 275 °C	473 - 527 °F	
Melt Temperature	250 - 270 °C	482 - 518 °F	Do not melt above 280°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 ²	
Flammability Rating	SE	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	
Needle Test	OK	IEC 695-2-2, 1 or 2 mm

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