

Nilit Nilamid A G5 FR C4 25% Glass Fiber Reinforced, Flame Retardant PA66 (with Halogens)

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

Material Notes:

Description: Nilamid A G5 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 0.8 mmUL listed GWIT 825 °C and GWFI 960°C at 0.8 mm, compliant with IEC 60335-4UL listed on CTI PCL 1 (CTI = 425 V)Excellent mechanical performanceColorable in light colorsEasy processing Information provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Nilamid-A-G5-FR-C4-25-Glass-Fiber-Reinforced-Flame-Retardant-PA66-with-Halogens.php

Physical Properties	Metric	English	Comments
Density	1.58 g/cc	0.0571 lb/in ³	ASTM D792, ISO 1183
Water Absorption	0.50 %	0.50 %	23°C, 24h in H ₂ O; sim. ISO 62
Water Absorption at Saturation	4.0 %	4.0 %	sim. ISO 62
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	Euronil
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	Euronil

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	125 MPa	18100 psi	ISO 527, ASTM D638
Elongation at Break	2.0 %	2.0 %	
Tensile Modulus	8.00 GPa	1160 ksi	ISO 527, ASTM D638
Flexural Yield Strength	185 MPa	26800 psi	ISO 178, ASTM D790
	130 MPa	18900 psi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Flexural Modulus	8.50 GPa	1230 ksi	ISO 178, ASTM D790
	4.80 GPa	696 ksi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Izod Impact, Notched (ISO)	5.00 kJ/m ²	2.38 ft-lb/in ²	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Mechanical Properties	6.50 kJ/m ² Metric	3.09 ft-lb/in ² English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	2.70 J/cm ²	12.8 ft-lb/in ²	ISO 179
	2.40 J/cm ²	11.4 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179
	0.500 J/cm ²	2.38 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	110 °C	230 °F	20,000 hr; IEC 216
Deflection Temperature at 0.46 MPa (66 psi)	250 °C	482 °F	ISO 75, ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	242 °C	468 °F	ISO 75, ASTM D648
Vicat Softening Point	240 °C	464 °F	49 N; ISO 306, ASTM D1525
	254 °C	489 °F	9.8 N; ISO 306, ASTM D1525
Flammability, UL94	V-0	V-0	
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	V-0	V-0	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-0	V-0	
	@Thickness 3.20 mm	@Thickness 0.126 in	
Oxygen Index	36 %	36 %	ASTM D2863
Glow Wire Test	825 °C	1520 °F	Glow Wire Ignition Temperature; IEC 695-2-13
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	875 °C	1610 °F	Glow Wire Ignition Temperature; IEC 695-2-13
	@Thickness 3.20 mm	@Thickness 0.126 in	
	960 °C	1760 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	
	960 °C	1760 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 0.800 mm	@Thickness 0.0315 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	
	400 V	400 V	Sol. A; IEC 112, UL 746A
	@Thickness 3.20 mm	@Thickness 0.126 in	

Processing Properties	Metric	English	Comments
Nozzle Temperature	275 - 285 °C	527 - 545 °F	
Zone 1	260 - 280 °C	500 - 536 °F	hopper
Zone 2	260 - 280 °C	500 - 536 °F	
Zone 3	270 - 280 °C	518 - 536 °F	
Zone 4	275 - 285 °C	527 - 545 °F	
Melt Temperature	275 - 290 °C	527 - 554 °F	Do not melt above 290°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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