

Nilit Nilitop BT G6 FR C3 is a 30% Glass Fiber Reinforced, Flame Retardant PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 30% Glass Fiber Filled

Material Notes:

Description: Nilitop BT G6 FR C3 is a 30% glass fiber reinforced, flame retardant PBT with halogens. The flame retardant does not contain PBB and PBDE, so it is compliant with the WEEE directive. It is widely used for applications like connectors and components for appliances. Key characteristics: High stiffness High strength Low moisture absorption Colorable Good thermal performance UL 94 V0 listing at 0.7 mm Information provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Nilitop-BT-G6-FR-C3-is-a-30-Glass-Fiber-Reinforced-Flame-Retardant-PBT.php

Physical Properties	Metric	English	Comments
Density	1.63 g/cc	0.0589 lb/in ³	ASTM D792, ISO 1183
Water Absorption	0.20 %	0.20 %	23°C, 24h in H ₂ O; sim. ISO 62
Water Absorption at Saturation	0.30 %	0.30 %	sim. ISO 62
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 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	2.5 %	2.5 %	ISO 527, ASTM D638
Flexural Yield Strength	180 MPa	26100 psi	ISO 178, ASTM D790
	115 MPa	16700 psi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Flexural Modulus	10.0 GPa	1450 ksi	ISO 178, ASTM D790
	5.50 GPa	798 ksi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Izod Impact, Notched (ISO)	7.00 kJ/m ²	3.33 ft-lb/in ²	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	9.00 kJ/m ²	4.28 ft-lb/in ²	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	3.00 J/cm ²	14.3 ft-lb/in ²	ISO 179
	2.50 J/cm ²	11.9 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature -30.0 °C	English @ Temperature -22.0 °F	ISO 179 Comments
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	140 °C	284 °F	20,000 hr; IEC 216
Deflection Temperature at 0.46 MPa (66 psi)	221 °C	430 °F	ISO 75, ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	202 °C	396 °F	ISO 75, ASTM D648
Vicat Softening Point	200 °C	392 °F	49 N; ISO 306, ASTM D1525
	220 °C	428 °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	34 %	34 %	ASTM D2863
Glow Wire Test	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	23.0 kV/mm	584 kV/in	ASTM D149
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Comparative Tracking Index	125 V	125 V	Sol. B; IEC 112, UL 746A
	@Thickness 3.20 mm	@Thickness 0.126 in	
	250 V	250 V	Sol. A; IEC 112, UL 746A
	@Thickness 3.20 mm	@Thickness 0.126 in	

Descriptive Properties	Value	Comments
Flammability Rating	SE	FMVSS No. 302, 355x100x1 mm
Heat Resistance - Ball Test	OK	at 125°C, IEC 309
	OK	at 165°C, IEC 309
Needle Test	OK	IEC 695-2-2, 1 or 2 mm

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