

SABIC Innovative Plastics NORYL GFN3 PPE+PS

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO , Polystyrene (PS)

Material Notes:

PPE+PS blend. 30% Glass reinforced. NSF 61 listing in several colors (restrictions apply). FDA compliance (restrictions apply). Low water absorption. Hydrolytic stability. Dimensional stability. Suitable for fluid engineering applications including pump housings, pump impellers and water meter components.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GFN3-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.29 g/cc	1.29 g/cc	ASTM D792
Water Absorption	0.060 % @Time 86400 sec	0.060 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.0010 - 0.0040 cm/cm @Thickness 3.20 mm	0.0010 - 0.0040 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	8.6 g/10 min @Load 5.00 kg, Temperature 300 Â°C	8.6 g/10 min @Load 11.0 lb, Temperature 572 Â°F	ASTM D1238
Melt Index of Compound	7.0 g/10 min @Load 5.00 kg, Temperature 300 Â°C	7.0 g/10 min @Load 11.0 lb, Temperature 572 Â°F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	108	108	ASTM D785
Tensile Strength at Break	116 MPa	16800 psi	Type I, 5 mm/min; ASTM D638
	117 MPa	17000 psi	ISO 527
Elongation at Break	1.8 %	1.8 %	ISO 527
	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	8.74 GPa	1270 ksi	1 mm/min; ISO 527
	9.15 GPa	1330 ksi	5 mm/min; ASTM D638
Flexural Strength	183 MPa	26500 psi	ISO 178
Flexural Yield Strength	162 MPa	23500 psi	2.6 mm/min, 100 mm span; ASTM D790
	180 MPa	26100 psi	1.3 mm/min, 50 mm span; ASTM

Mechanical Properties	Metric	English	^{D790} Comments
Flexural Modulus	7.17 GPa	1040 ksi	2.6 mm/min, 100 mm span; ASTM D790
	8.00 GPa	1160 ksi	1.3 mm/min, 50 mm span; ASTM D790
	8.71 GPa	1260 ksi	ISO 178
Izod Impact, Notched	1.17 J/cm	2.19 ft-lb/in	ASTM D256
	1.24 J/cm	2.32 ft-lb/in	ASTM D256
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Izod Impact, Unnotched	5.88 J/cm	11.0 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	12.0 kJ/mÅ²	5.71 ft-lb/inÅ²	80*10*4; ISO 180/1A
	11.0 kJ/mÅ²	5.23 ft-lb/inÅ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Izod Impact, Unnotched (ISO)	31.0 kJ/mÅ²	14.8 ft-lb/inÅ²	80*10*4; ISO 180/1U
	35.0 kJ/mÅ²	16.7 ft-lb/inÅ²	80*10*4; ISO 180/1U
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Charpy Impact Unnotched	3.90 J/cmÅ²	18.6 ft-lb/inÅ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	4.70 J/cmÅ²	22.4 ft-lb/inÅ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Charpy Impact, Notched	1.20 J/cmÅ²	5.71 ft-lb/inÅ²	ISO 179/2C
	1.10 J/cmÅ²	5.23 ft-lb/inÅ²	ISO 179/2C
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.6 Åµm/m-Å°C	17.0 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
CTE, linear, Transverse to Flow	61.8 Åµm/m-Å°C	34.3 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	143 Â°C	289 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
	158 Â°C	316 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	137 Â°C	279 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	137 Â°C	279 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	137 Â°C	279 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	143 Â°C	289 Â°F	Rate B/50; ISO 306
	147 Â°C	297 Â°F	Rate B/120; ISO 306
UL RTI, Electrical	90.0 Â°C	194 Â°F	UL 746B
UL RTI, Mechanical with Impact	90.0 Â°C	194 Â°F	UL 746B
UL RTI, Mechanical without Impact	90.0 Â°C	194 Â°F	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.47 mm	@Thickness 0.0579 in	
Oxygen Index	26 %	26 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.93	2.93	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	21.6 kV/mm	549 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.00090	0.00090	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	Tungsten; ASTM D495
Comparative Tracking Index	100 - 175 V	100 - 175 V	UL 746A
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 sec	UL 746A

Electrical Properties High Amp Arc Ignition, HAI	Metric mm/15 arcs	English in/5 arcs	Comments UL 746A
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL 746A

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