

SABIC Innovative Plastics NORYL GFN1 PPE+PS

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

Material Notes:

PPE+PS blend. 10% 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 water filter and water meter components.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GFN1-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.13 g/cc	1.13 g/cc	ASTM D792
Water Absorption	0.060 % @Time 86400 sec	0.060 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.0020 - 0.0050 cm/cm @Thickness 3.20 mm	0.0020 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	16.6 g/10 min @Load 5.00 kg, Temperature 300 Â°C	16.6 g/10 min @Load 11.0 lb, Temperature 572 Â°F	ASTM D1238
Melt Index of Compound	16 g/10 min @Load 5.00 kg, Temperature 300 Â°C	16 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	104	104	ASTM D785
Tensile Strength at Break	63.0 MPa	9140 psi	Type I, 5 mm/min; ASTM D638
	64.0 MPa	9280 psi	ISO 527
Elongation at Break	3.0 %	3.0 %	ASTM D638
	3.0 %	3.0 %	ISO 527
Tensile Modulus	4.35 GPa	631 ksi	5 mm/min; ASTM D638
	4.40 GPa	638 ksi	1 mm/min; ISO 527
Flexural Strength	122 MPa	17700 psi	ISO 178
Flexural Yield Strength	107 MPa	15500 psi	2.6 mm/min, 100 mm span; ASTM D790
	116 MPa	16800 psi	1.3 mm/min, 50 mm span; ASTM

Mechanical Properties	Metric	English	Comments
Flexural Modulus	3.58 GPa	519 ksi	2.6 mm/min, 100 mm span; ASTM D790
	3.84 GPa	557 ksi	1.3 mm/min, 50 mm span; ASTM D790
	4.16 GPa	603 ksi	ISO 178
Izod Impact, Notched	1.18 J/cm	2.21 ft-lb/in	ASTM D256
	1.03 J/cm	1.93 ft-lb/in	ASTM D256
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Izod Impact, Unnotched	4.49 J/cm	8.41 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	10.0 kJ/mÅ²	4.76 ft-lb/inÅ²	80*10*4; ISO 180/1A
	9.00 kJ/mÅ²	4.28 ft-lb/inÅ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Izod Impact, Unnotched (ISO)	27.0 kJ/mÅ²	12.8 ft-lb/inÅ²	80*10*4; ISO 180/1U
	25.0 kJ/mÅ²	11.9 ft-lb/inÅ²	80*10*4; ISO 180/1U
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Charpy Impact Unnotched	3.40 J/cmÅ²	16.2 ft-lb/inÅ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.30 J/cmÅ²	15.7 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	1.10 J/cmÅ²	5.23 ft-lb/inÅ²	ISO 179/2C
	0.900 J/cmÅ²	4.28 ft-lb/inÅ²	ISO 179/2C
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Dart Drop, Total Energy	21.0 J	15.5 ft-lb	ASTM D3763
	@Temperature 23.0 Å°C	@Temperature 73.4 Å°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	51.2 Åµm/m-Å°C	28.4 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	

Thermal Properties CTE, linear, transverse to Flow	71.4 Åum/m-Å°C Metric	39.7 Åuin/in-Å°F English	Comments ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	132 Å°C	270 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	131 Å°C	268 Å°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	124 Å°C	255 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	122 Å°C	252 Å°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	125 Å°C	257 Å°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	131 Å°C	268 Å°F	Rate B/50; ISO 306
	134 Å°C	273 Å°F	Rate B/120; ISO 306
UL RTI, Electrical	90.0 Å°C	194 Å°F	UL 746B
UL RTI, Mechanical with Impact	90.0 Å°C	194 Å°F	UL 746B
UL RTI, Mechanical without Impact	90.0 Å°C	194 Å°F	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.47 mm	@Thickness 0.0579 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.9	2.9	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.0014	0.0014	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	Tungsten; ASTM D495
Hot Wire Ignition, HWI	0.00 - 7.0 sec	0.00 - 7.0 sec	UL 746A
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min	>= 5.91 in/min	UL 746A

Descriptive Properties	Value	Comments
UV-light, water exposure/immersion	F1	UL 746C

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