

SABIC Innovative Plastics NORYL GFN2 PPE+PS

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

Material Notes:

PPE+PS blend. 20% Glass reinforced. UL746C F1. 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 and impellers, valve components and others.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GFN2-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Water Absorption	0.060 %	0.060 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0020 - 0.0050 cm/cm	0.0020 - 0.0050 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	9.0 g/10 min	9.0 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 300 Â°C	@Load 11.0 lb, Temperature 572 Â°F	
Melt Index of Compound	8.0 g/10 min	8.0 g/10 min	MVR [cm^3/10 min]; ISO 1133
	@Load 5.00 kg, Temperature 300 Â°C	@Load 11.0 lb, Temperature 572 Â°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	106	106	ASTM D785
Tensile Strength at Break	90.0 MPa	13100 psi	Type I, 5 mm/min; ASTM D638
	97.0 MPa	14100 psi	5 mm/min; ISO 527
Elongation at Break	2.5 %	2.5 %	5 mm/min; ISO 527
	2.6 %	2.6 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	6.20 GPa	899 ksi	5 mm/min; ASTM D638
	7.07 GPa	1030 ksi	1 mm/min; ISO 527
Flexural Yield Strength	160 MPa	23200 psi	1.3 mm/min, 50 mm span; ASTM D790
	167 MPa	24200 psi	2 mm/min; ISO 178
	5.80 GPa	841 ksi	1.3 mm/min, 50 mm span; ASTM

Flexural Modulus Mechanical Properties	Metric	English	D790 Comments
	6.54 GPa	949 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.19 J/cm	2.23 ft-lb/in	ASTM D256
	0.960 J/cm	1.80 ft-lb/in	
	@Temperature -40.0 °C	@Temperature -40.0 °F	ASTM D256
Izod Impact, Unnotched	6.50 J/cm	12.2 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	11.0 kJ/mÂ²	5.23 ft-lb/inÂ²	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.10 J/cmÂ²	5.23 ft-lb/inÂ²	ISO 179/2C
Dart Drop, Total Energy	22.0 J	16.2 ft-lb	
	@Temperature 23.0 °C	@Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	28.9 Âµm/m-Â°C	16.1 Âµin/in-Â°F	
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	ASTM E 831
CTE, linear, Transverse to Flow	82.6 Âµm/m-Â°C	45.9 Âµin/in-Â°F	
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	ASTM E 831
Deflection Temperature at 0.46 MPa (66 psi)	143 Â°C	289 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	140 Â°C	284 Â°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
	143 Â°C	289 Â°F	
	@Thickness 6.40 mm	@Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	137 Â°C	279 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	135 Â°C	275 Â°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
	137 Â°C	279 Â°F	
	@Thickness 6.40 mm	@Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	143 Â°C	289 Â°F	Rate B/50; ISO 306
	146 Â°C	295 Â°F	Rate B/120; ISO 306

UL RTI Electrical Thermal Properties	90.0 Â°C Metric	194 Â°F English	UL 746B Comments
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 @Thickness 1.47 mm	HB @Thickness 0.0579 in	UL 94
Oxygen Index	26 %	26 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.86 @Frequency 50.0 - 60.0 Hz	2.86 @Frequency 50.0 - 60.0 Hz	ASTM D150
Dielectric Strength	16.5 kV/mm @Thickness 3.20 mm	419 kV/in @Thickness 0.126 in	in oil; ASTM D149
Dissipation Factor	0.00080 @Frequency 50.0 - 60.0 Hz	0.00080 @Frequency 50.0 - 60.0 Hz	ASTM D150
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	Tungsten; ASTM D495
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 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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