

SABIC Innovative Plastics NORYL GFN1 PPE+HIPS (Asia Pacific)

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

Material Notes:

PPE+PS blend. 10% Glass reinforced. 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-PPEHIPS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.17 g/cc	1.17 g/cc	ASTM D792
Density	1.17 g/cc	0.0423 lb/in ³	ISO 1183
Moisture Absorption	0.0400 %	0.0400 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.12 %	0.12 %	ISO 62
Linear Mold Shrinkage, Flow	0.0055 - 0.0066 cm/cm @Thickness 3.20 mm	0.0055 - 0.0066 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	4.0 g/10 min @Load 5.00 kg, Temperature 280 ^o C	4.0 g/10 min @Load 11.0 lb, Temperature 536 ^o F	ASTM D1238
Melt Index of Compound	4.0 g/10 min @Load 5.00 kg, Temperature 280 ^o C	4.0 g/10 min @Load 11.0 lb, Temperature 536 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	60.0 MPa	8700 psi	50 mm/min; ISO 527
	75.0 MPa	10900 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	60.0 MPa	8700 psi	50 mm/min; ISO 527
	75.0 MPa	10900 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	3.5 %	3.5 %	Type I, 50 mm/min; ASTM D638
	4.5 %	4.5 %	50 mm/min; ISO 527
Elongation at Yield	3.5 %	3.5 %	Type I, 50 mm/min; ASTM D638
	4.5 %	4.5 %	50 mm/min; ISO 527
Tensile Modulus	3.90 GPa	566 ksi	1 mm/min; ISO 527

Mechanical Properties	4.40 GPa Metric	638 ksi English	5 mm/min: ASTM D638 Comments
Flexural Yield Strength	105 MPa	15200 psi	1.3 mm/min, 50 mm span; ASTM D790
	115 MPa	16700 psi	2 mm/min; ISO 178
Flexural Modulus	3.40 GPa	493 ksi	1.3 mm/min, 50 mm span; ASTM D790
	3.70 GPa	537 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.840 J/cm	1.57 ft-lb/in	ASTM D256
	0.800 J/cm @Temperature -30.0 Â°C	1.50 ft-lb/in @Temperature -22.0 Â°F	ASTM D256
Izod Impact, Unnotched	4.10 J/cm	7.68 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	10.0 kJ/mÂ²	4.76 ft-lb/inÂ²	80*10*4; ISO 180/1A
	9.00 kJ/mÂ² @Temperature -30.0 Â°C	4.28 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	30.0 kJ/mÂ²	14.3 ft-lb/inÂ²	80*10*4; ISO 180/1U
	30.0 kJ/mÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1U
Charpy Impact, Notched	0.800 J/cmÂ²	3.81 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	20.0 J	14.8 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	38.0 Âµm/m-Â°C	21.1 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	45.0 Âµm/m-Â°C	25.0 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
CTE, linear, Transverse to Flow	82.0 Âµm/m-Â°C	45.6 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	

Thermal Properties	85.0 Åum/m-Å°C Metric	47.2 Åuin/in-Å°F English	Comments ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	135 Å°C @Thickness 3.20 mm	275 Å°F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	129 Å°C	264 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	130 Å°C @Thickness 3.20 mm	266 Å°F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	138 Å°C	280 Å°F	Rate B/50; ASTM D1525
	138 Å°C	280 Å°F	Rate B/50; ISO 306
	140 Å°C	284 Å°F	Rate B/120; ISO 306

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