

SABIC Innovative Plastics NORYL GFN1520V PPE+HIPS (Asia Pacific)

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

Material Notes:

NORYL GFN1520V is a 20% glass fibre reinforced material with improved hydrolytic stability. This grade has been certified for potable water applications up to 85C in Europe and North America, color dependent.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GFN1520V-PPEHIPS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.24 g/cc	1.24 g/cc	ASTM D792
Density	1.25 g/cc	0.0452 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 %	0.20 %	ISO 62
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm @Thickness 3.20 mm	0.0020 - 0.0040 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0030 - 0.0060 cm/cm @Thickness 3.20 mm	0.0030 - 0.0060 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	7.0 g/10 min @Load 5.00 kg, Temperature 280 °C	7.0 g/10 min @Load 11.0 lb, Temperature 536 °F	ASTM D1238
Melt Index of Compound	13 g/10 min @Load 10.0 kg, Temperature 280 °C	13 g/10 min @Load 22.0 lb, Temperature 536 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	93.0 MPa	13500 psi	Type I, 5 mm/min; ASTM D638
	100 MPa	14500 psi	5 mm/min; ISO 527
Tensile Strength, Yield	93.0 MPa	13500 psi	Type I, 5 mm/min; ASTM D638
	100 MPa	14500 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
Elongation at Yield	2.5 %	2.5 %	5 mm/min; ISO 527
	2.6 %	2.6 %	Type I, 5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Tensile Modulus	6.40 GPa	928 ksi	5 mm/min; ASTM D538
	6.40 GPa	928 ksi	1 mm/min; ISO 527
Flexural Yield Strength	140 MPa	20300 psi	1.3 mm/min, 50 mm span; ASTM D790
	145 MPa	21000 psi	2 mm/min; ISO 178
Flexural Modulus	5.30 GPa	769 ksi	1.3 mm/min, 50 mm span; ASTM D790
	5.30 GPa	769 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.830 J/cm	1.55 ft-lb/in	ASTM D256
	0.710 J/cm	1.33 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched	4.90 J/cm	9.18 ft-lb/in	ASTM D4812
	4.90 J/cm	9.18 ft-lb/in	ASTM D4812
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	30.0 kJ/m ²	14.3 ft-lb/in ²	80*10*4; ISO 180/1U
	30.0 kJ/m ²	14.3 ft-lb/in ²	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	3.50 J/cm ²	16.7 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.50 J/cm ²	16.7 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	16.0 J	11.8 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.0 μm/m-°C	16.7 μin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	30.0 μm/m-°C	16.7 μin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	70.0 μm/m-°C	38.9 μin/in-°F	ASTM E 831
	@Temperature -40.0 -	@Temperature -40.0 -	

Thermal Properties	40.0 °C Metric	104 °F English	Comments
	70.0 µm/m-°C	38.9 µin/in-°F	
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	140 °C	284 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	135 °C	275 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	137 °C	279 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	140 °C	284 °F	Rate B/50; ASTM D1525
	140 °C	284 °F	Rate B/50; ISO 306
	145 °C	293 °F	Rate B/120; ISO 306
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	26 %	26 %	ISO 4589

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	2.9	2.9	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.9	2.9	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	18.0 kV/mm	457 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.00080	0.00080	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0030	0.0030	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	Passes	IEC 60695-10-2

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