

SABIC Innovative Plastics NORYL GFN3V PPE+HIPS (Europe-Africa-Middle East)

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

Material Notes:

NORYL GFN3V is a 30 % glass fibre reinforced material with a HDT/A of 145C according ISO 75. NORYL GFN3V has been approved for potable water applications up to 85C by the UK WFBS according BS 6920 in limited colours.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GFN3V-PPEHIPS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.30 g/cc	0.0470 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 %	0.20 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 - 0.0030 cm/cm	0.0010 - 0.0030 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	7.0 g/10 min @Load 10.0 kg, Temperature 280 ^o C	7.0 g/10 min @Load 22.0 lb, Temperature 536 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	130 MPa	18900 psi	ISO 2039-1
Tensile Strength at Break	100 MPa	14500 psi	5 mm/min; ISO 527
Elongation at Break	1.5 %	1.5 %	5 mm/min; ISO 527
Tensile Modulus	8.00 GPa	1160 ksi	1 mm/min; ISO 527
Flexural Strength	125 MPa	18100 psi	2 mm/min; ISO 178
Flexural Modulus	6.00 GPa	870 ksi	2 mm/min; ISO 178
Izod Impact, Unnotched (ISO)	25.0 kJ/m ²	11.9 ft-lb/in ²	80*10*4; ISO 180/1U
	25.0 kJ/m ² @Temperature -30.0 ^o C	11.9 ft-lb/in ² @Temperature -22.0 ^o F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	2.50 J/cm ²	11.9 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	2.50 J/cm ² @Temperature -30.0 ^o C	11.9 ft-lb/in ² @Temperature -22.0 ^o F	Edgew 80*10*4 sp=62mm; ISO 179/1eU

Mechanical Properties ^{1500 Cycles}	Metric	English	Comments ^{SABIC Method}
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Thermal Properties	Metric	English	Comments
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CTE, linear, Parallel to Flow	30.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 23.0 - 80.0 $\text{Å}^\circ\text{C}$	16.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 73.4 - 176 $\text{Å}^\circ\text{F}$	ISO 11359-2
CTE, linear, Transverse to Flow	70.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 23.0 - 80.0 $\text{Å}^\circ\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 73.4 - 176 $\text{Å}^\circ\text{F}$	ISO 11359-2
Thermal Conductivity	0.280 W/m-K	1.94 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	145 $\text{Å}^\circ\text{C}$	293 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	140 $\text{Å}^\circ\text{C}$	284 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	145 $\text{Å}^\circ\text{C}$	293 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	155 $\text{Å}^\circ\text{C}$	311 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
	155 $\text{Å}^\circ\text{C}$	311 $\text{Å}^\circ\text{F}$	Rate A/50; ISO 306
UL RTI, Electrical	50.0 $\text{Å}^\circ\text{C}$	122 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	50.0 $\text{Å}^\circ\text{C}$	122 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	50.0 $\text{Å}^\circ\text{C}$	122 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	UL 94
Oxygen Index	26 %	26 %	ISO 4589
Glow Wire Test	850 $\text{Å}^\circ\text{C}$ @Thickness 3.20 mm	1560 $\text{Å}^\circ\text{F}$ @Thickness 0.126 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
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Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	ROA; IEC 60093
Dielectric Constant	2.9 @Frequency 1.00e+6 Hz	2.9 @Frequency 1.00e+6 Hz	IEC 60250
	2.9	2.9	

Electrical Properties	Metric	English	IEC 60250 Comments
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	18.0 kV/mm @Thickness 3.20 mm	457 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
Dissipation Factor	0.00060 @Frequency 50.0 - 60.0 Hz	0.00060 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0010 @Frequency 1.00e+6 Hz	0.0010 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	250 V	250 V	IEC 60112

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

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China