

SABIC Innovative Plastics NORYL GFN3 PPE+HIPS (Europe-Africa-Middle East)

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

Material Notes:

Noryl GFN3 is a standard 30 % glass filled material with a HDT/A of 145C according to ISO 75

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GFN3-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
Taber Abrasion, mg/1000 Cycles	70	70	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	16.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 176 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	70.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 176 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	0.280 W/m-K	1.94 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	ISO 8302
Hot Ball Pressure Test	$\leq 125 \text{ Å}^\circ\text{C}$	$\leq 257 \text{ Å}^\circ\text{F}$	IEC 60695-10-2
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	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	26 %	26 %	ISO 4589
Glow Wire Test	850 $\text{Å}^\circ\text{C}$	1560 $\text{Å}^\circ\text{F}$	IEC 60695-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
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	2.9	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.9	2.9	

Electrical Properties	@Frequency 50.0 - 60.0 Metric Hz	@Frequency 50.0 - 60.0 English Hz	IEC 60250 Comments
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, 125Â°C +/- 2Â°C	PASSES	IEC 60695-10-2

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