SABIC Innovative Plastics NORYL SE1GFN2 PPE+HIPS (Europe-Africa-Middle East)

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

Material Notes:

Noryl* SE1GFN2 is a 20% glass reinforced, injection moldable modified polyphenylene ether resin. Designed for improved dimensional stability and good flow , this resin also uses non-chlorinated, non-brominated FR additives to achieve a V1 UL94 rating at 1.5 mm and UL94 5VA rating @ 2.0 mm. Noryl SE1GFN2 has a GWIT of 800C @ 1.00 mm according to IEC 60695-2-13. Noryl SE1GFN2 may be an excellent material candidate for electrical or electronic applications requiring good rheological properties, heat resistance, hydrolysis resistance, low density and thin wall flame resistance. SE1GFN2 is halogen free according to VDE/DIN 472 part 815.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-SE1GFN2-PPEHIPS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.25 g/cc	1.25 g/cc	ASTM D792
Density	1.25 g/cc	0.0452 lb/inÂ³	ISO 1183
Moisture Absorption	0.0700 %	0.0700 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.22 %	0.22 %	ISO 62
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm	0.0020 - 0.0040 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	12 g/10 min @Load 10.0 kg, Temperature 280 Â°C	12 g/10 min @Load 22.0 lb, Temperature 536 Â°F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	125 MPa	18100 psi	ISO 2039-1
Tensile Strength at Break	80.0 MPa	11600 psi	5 mm/min; ISO 527
Elongation at Break	2.0 %	2.0 %	5 mm/min; ISO 527
Tensile Modulus	5.50 GPa	798 ksi	1 mm/min; ISO 527
Flexural Strength	125 MPa	18100 psi	2 mm/min; ISO 178
Flexural Modulus	4.50 GPa	653 ksi	2 mm/min; ISO 178
Izod Impact, Unnotched (ISO)	25.0 kJ/mÂ²	11.9 ft-lb/inÂ²	80*10*4; ISO 180/1U
	25.0 kJ/mÂ² @Temperature -30.0 Â°C	11.9 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1U

Mechanical Properties	Metric	English	Comments
Charpy Impact Unnotched	3.00 J/cmÂ²	14.3 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.00 J/cmÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Taber Abrasion, mg/1000 Cycles	65	65	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	16.7 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
	50.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	27.8 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	50.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	27.8 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	68.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	37.8 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	68.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	37.8 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
	70.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	38.9 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
Thermal Conductivity	0.280 W/m-K	1.94 BTU-in/hr-ftÂ²-Â°F	ISO 8302
Hot Ball Pressure Test	<= 135 Â°C	<= 275 Â°F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	135 Â°C	275 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	130 Â°C	266 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	140 Â°C	284 Â°F	Rate B/50; ISO 306
	145 Â°C	293 Â°F	Rate B/120; ISO 306
	150 Â°C	302 Â°F	Rate A/50; ISO 306
UL RTI, Electrical	110 Â°C	230 Â°F	UL 746B

Thermal Properties with Impact	Metric	English	Comments
UL RTI, Mechanical without Impact	110 Â°C	230 Â°F	UL 746B
Flammability, UL94	V-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	UL 94
	V-0 @Thickness 6.00 mm	V-0 @Thickness 0.236 in	UL 94
	5VA @Thickness 2.00 mm	5VA @Thickness 0.0787 in	UL 94
Oxygen Index	30 %	30 %	ISO 4589
Glow Wire Test	800 Â°C	1470 Â°F	IEC 60695-2-13
	800 Â°C	1470 Â°F	IEC 60695-2-13
	960 Â°C @Thickness 3.20 mm	1760 Â°F @Thickness 0.126 in	IEC 60695-2-12

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 @Frequency 1.00e+6 Hz	2.9 @Frequency 1.00e+6 Hz	IEC 60250
	3.0 @Frequency 50.0 - 60.0 Hz	3.0 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	16.0 kV/mm @Thickness 3.20 mm	406 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	25.0 kV/mm @Thickness 1.60 mm	635 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
	30.0 kV/mm @Thickness 0.800 mm	762 kV/in @Thickness 0.0315 in	in oil; IEC 60243-1
Dissipation Factor	0.0020 @Frequency 1.00e+6 Hz	0.0020 @Frequency 1.00e+6 Hz	IEC 60250

Electrical Properties	Metric	English	Comments
	0.0040	0.0040	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A
	225 V	225 V	IEC 60112

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

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