

SABIC Innovative Plastics Noryl RF1132 PPE+PP

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO , Polypropylene (PP)

Material Notes:

PPE+PP blend for high frequency applications. Good heat resistance and low DK.This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Noryl-RF1132-PPEPP.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.970 g/cc	0.970 g/cc	ASTM D 792
Density	0.970 g/cc	0.0350 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.020 %	0.020 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.060 % @Temperature 23.0 ^o C	0.060 % @Temperature 73.4 ^o F	ISO 62
Linear Mold Shrinkage, Flow	0.0080 - 0.012 cm/cm @Thickness 3.20 mm	0.0080 - 0.012 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	10.6 g/10 min @Load 5.00 kg, Temperature 260 ^o C	10.6 g/10 min @Load 11.0 lb, Temperature 500 ^o F	ASTM D 1238
	11 g/10 min @Load 5.00 kg, Temperature 260 ^o C	11 g/10 min @Load 11.0 lb, Temperature 500 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	32.0 MPa	4640 psi	Type I, 50 mm/min; ASTM D 638
	33.0 MPa	4790 psi	50 mm/min; ISO 527
Tensile Strength, Yield	34.0 MPa	4930 psi	50 mm/min; ISO 527
	35.0 MPa	5080 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	170 %	170 %	50 mm/min; ISO 527
	195 %	195 %	Type I, 50 mm/min; ASTM D 638
Elongation at Yield	2.6 %	2.6 %	50 mm/min; ISO 527
	6.5 %	6.5 %	Type I, 50 mm/min; ASTM D 638

Tensile Modulus Mechanical Properties	1.34 GPa Metric	194 ksi English	50 mm/min; ASTM D 638 Comments
	1.50 GPa	218 ksi	1 mm/min; ISO 527
Flexural Yield Strength	50.0 MPa	7250 psi	2 mm/min; ISO 178
	51.0 MPa	7400 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	1.55 GPa	225 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	1.70 GPa	247 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.49 J/cm @Temperature -30.0 Â°C	2.79 ft-lb/in @Temperature -22.0 Â°F	ASTM D 256
	4.37 J/cm @Temperature 23.0 Â°C	8.19 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Notched (ISO)	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
	25.0 kJ/mÂ² @Temperature 23.0 Â°C	11.9 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	2.50 J/cmÂ² @Temperature 23.0 Â°C	11.9 ft-lb/inÂ² @Temperature 73.4 Â°F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	37.0 J @Temperature 23.0 Â°C	27.3 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	81.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	45.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	90.0 Âµm/m-Â°C @Temperature 23.0 - 60.0 Â°C	50.0 Âµin/in-Â°F @Temperature 73.4 - 140 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	112 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	62.2 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831

Thermal Properties	120 Åum/m-Å°C Metric	66.7 Åuin/in-Å°F English	Comments ISO 11359-2
	@Temperature 23.0 - 60.0 Å°C	@Temperature 73.4 - 140 Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	113 Å°C @Thickness 3.20 mm	235 Å°F @Thickness 0.126 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	75.0 Å°C @Thickness 3.20 mm	167 Å°F @Thickness 0.126 in	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	77.0 Å°C @Thickness 3.20 mm	171 Å°F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	95.0 Å°C	203 Å°F	Rate B/50; ISO 306
	100 Å°C	212 Å°F	Rate B/120; ISO 306
	138 Å°C	280 Å°F	Rate B/50; ASTM D 1525
Flammability, UL94	HB @Thickness 1.52 mm	HB @Thickness 0.0598 in	UL 94

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.2 @Frequency 1.00e+6 Hz	2.2 @Frequency 1.00e+6 Hz	IEC 60250
	2.2 @Frequency 50.0 - 60.0 Hz	2.2 @Frequency 50.0 - 60.0 Hz	IEC 60250
	2.38 @Frequency 1.20e+9 Hz	2.38 @Frequency 1.20e+9 Hz	ASTM D 2520 - Mth B
	2.39 @Frequency 1.00e+10 Hz	2.39 @Frequency 1.00e+10 Hz	ASTM D 2520 - Mth B
	2.42 @Frequency 2.40e+9 Hz	2.42 @Frequency 2.40e+9 Hz	ASTM D 2520 - Mth B
Dielectric Strength	22.0 kV/mm @Thickness 3.20 mm	559 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
Dissipation Factor	0.0010 @Frequency 1.00e+6 Hz	0.0010 @Frequency 1.00e+6 Hz	IEC 60250

Electrical Properties	Metric	English	Comments
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