

SABIC Innovative Plastics NORYL SE1X PPE+PS

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

Material Notes:

PPE+PS blend. Unfilled. Non-brominated, non-chlorinated FR system. UL94 V1, UL746C F1. Dielectric strength. Suitable for E/E market indoor/outdoor applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-SE1X-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.09 g/cc	1.09 g/cc	ASTM D792
Water Absorption	0.060 % @Time 86400 sec	0.060 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on Tensile Bar; SABIC Method
Melt Flow	8.5 g/10 min @Load 5.00 kg, Temperature 280 Â°C	8.5 g/10 min @Load 11.0 lb, Temperature 536 Â°F	ASTM D1238
Melt Index of Compound	8.0 g/10 min @Load 5.00 kg, Temperature 280 Â°C	8.0 g/10 min @Load 11.0 lb, Temperature 536 Â°F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	50.0 MPa	7250 psi	50 mm/min; ISO 527
	53.0 MPa	7690 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	61.0 MPa	8850 psi	50 mm/min; ISO 527
	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	15 %	15 %	Type I, 50 mm/min; ASTM D638
	20.7 %	20.7 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D638
	4.3 %	4.3 %	50 mm/min; ISO 527
Tensile Modulus	2.50 GPa	363 ksi	50 mm/min; ASTM D638
	2.67 GPa	387 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	98.0 MPa	14200 psi	2.5 mm/min, 100 mm span; ASTM D790
	99.0 MPa	14400 psi	2 mm/min; ISO 178
	100 MPa	14500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.40 GPa	348 ksi	2.6 mm/min, 100 mm span; ASTM D790
	2.56 GPa	371 ksi	2 mm/min; ISO 178
	2.70 GPa	392 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.80 J/cm	3.37 ft-lb/in	ASTM D256
	1.06 J/cm	1.99 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched	26.0 J/cm	48.7 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	14.0 kJ/mÂ²	6.66 ft-lb/inÂ²	80*10*4; ISO 180/1A
Dart Drop, Total Energy	49.0 J	36.1 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.4 Âµm/m-Â°C	44.7 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
CTE, linear, Transverse to Flow	88.1 Âµm/m-Â°C	48.9 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	129 Â°C	264 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	126 Â°C	259 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	129 Â°C	264 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	115 Â°C	239 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	112 Â°C	234 Â°F	

Thermal Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	unannealed; ASTM D648 Comments
	118 Â°C @Thickness 6.40 mm	244 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	132 Â°C	270 Â°F	Rate B/50; ISO 306
	135 Â°C	275 Â°F	Rate B/120; ISO 306
UL RTI, Electrical	110 Â°C	230 Â°F	UL 746B
UL RTI, Mechanical with Impact	105 Â°C	221 Â°F	UL 746B
UL RTI, Mechanical without Impact	110 Â°C	230 Â°F	UL 746B
Flammability, UL94	V-1 @Thickness 1.47 mm	V-1 @Thickness 0.0579 in	UL 94
	V-0 @Thickness 5.99 mm	V-0 @Thickness 0.236 in	UL 94

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.30e+16 ohm-cm	2.30e+16 ohm-cm	ASTM D257
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ASTM D257
Dielectric Constant	2.46 @Frequency 1.00e+6 Hz	2.46 @Frequency 1.00e+6 Hz	ASTM D150
	2.52 @Frequency 50.0 - 60.0 Hz	2.52 @Frequency 50.0 - 60.0 Hz	ASTM D150
Dielectric Strength	18.1 kV/mm @Thickness 3.20 mm	460 kV/in @Thickness 0.126 in	in oil; ASTM D149
Dissipation Factor	0.0021 @Frequency 1.00e+6 Hz	0.0021 @Frequency 1.00e+6 Hz	ASTM D150
	0.0034 @Frequency 50.0 - 60.0 Hz	0.0034 @Frequency 50.0 - 60.0 Hz	ASTM D150
Arc Resistance	60 - 120 sec	60 - 120 sec	Tungsten; ASTM D495
Comparative Tracking Index	400 - 600 V	400 - 600 V	UL 746A

High Voltage Arc-Tracking Rate, Electrical Properties	Metric	English	Comments
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Descriptive Properties	Value	Comments
Radiant Panel Listing	RP100	UL Tested
UV-light, water exposure/immersion	F1	UL 746C

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