

SABIC Innovative Plastics Noryl PC180X PPE+PS

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

Material Notes:

Nonbrominated, nonchlorinated flame retardant. V-1/5VA rated; 175F (90C) HDT. Improved productivity and reliability. 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-PC180X-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.11 g/cc	1.11 g/cc	ASTM D 792
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

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	117	117	ASTM D 785
Tensile Strength at Break	41.0 MPa	5950 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	22 %	22 %	Type I, 50 mm/min; ASTM D 638
Elongation at Yield	7.0 %	7.0 %	Type I, 50 mm/min; ASTM D 638
Flexural Yield Strength	79.0 MPa	11500 psi	2.6 mm/min, 100 mm span; ASTM D 790
Flexural Modulus	2.20 GPa	319 ksi	2.6 mm/min, 100 mm span; ASTM D 790
Izod Impact, Notched	0.900 J/cm @Temperature -30.0 Â°C	1.69 ft-lb/in @Temperature -22.0 Â°F	ASTM D 256
	3.09 J/cm @Temperature 23.0 Â°C	5.79 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched	11.74 J/cm @Temperature 23.0 Â°C	21.99 ft-lb/in @Temperature 73.4 Â°F	ASTM D 4812
Impact Test	3.00 J @Temperature 23.0	2.21 ft-lb	Instrumented Impact Energy @ peak; ASTM D 3763

Mechanical Properties	Metric	English	Comments
Taber Abrasion, mg/1000 Cycles	64 @Load 1.00 kg	64 @Load 2.20 lb	CS-17; ASTM D 1044

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	90.0 Â°C @Thickness 6.40 mm	194 Â°F @Thickness 0.252 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	79.0 Â°C @Thickness 6.40 mm	174 Â°F @Thickness 0.252 in	unannealed; ASTM D 648
UL RTI, Electrical	50.0 Â°C	122 Â°F	UL 746B
UL RTI, Mechanical with Impact	50.0 Â°C	122 Â°F	UL 746B
UL RTI, Mechanical without Impact	50.0 Â°C	122 Â°F	UL 746B
Flammability, UL94	V-2 @Thickness 1.47 mm	V-2 @Thickness 0.0579 in	UL 94
	V-1 @Thickness 2.99 mm	V-1 @Thickness 0.118 in	UL 94
	5VA @Thickness 3.81 mm	5VA @Thickness 0.150 in	UL 94

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.30e+16 ohm-cm	3.30e+16 ohm-cm	ASTM D 257
Surface Resistance	>= 1.00e+16 ohm	>= 1.00e+16 ohm	ASTM D 257
Dielectric Constant	2.53 @Frequency 1.00e+6 Hz	2.53 @Frequency 1.00e+6 Hz	ASTM D 150
	2.67 @Frequency 50.0 - 60.0 Hz	2.67 @Frequency 50.0 - 60.0 Hz	ASTM D 150
Dielectric Strength	17.7 kV/mm @Thickness 3.20 mm	450 kV/in @Thickness 0.126 in	in oil; ASTM D 149
Dissipation Factor	0.0026 @Frequency 1.00e+6 Hz	0.0026 @Frequency 1.00e+6 Hz	ASTM D 150

Electrical Properties	0.012 Metric	0.012 English	Comments
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	ASTM D 150
Arc Resistance	60 - 120 sec	60 - 120 sec	Tungsten, PLC code 6; ASTM D 495
Comparative Tracking Index	250 - 400 V	250 - 400 V	PLC code 2; UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	PLC code 2; UL 746A
High Amp Arc Ignition, HAI	15 - 30 arcs	15 - 30 arcs	surface, PLC code 3; UL 746A
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min	>= 5.91 in/min	PLC code 4; UL 746A

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