

SABIC Innovative Plastics Noryl PX0003 PPE+HIPS

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

Material Notes:

PX0003 resin is a modified PPE+PS blend with an excellent balance of non-chlorinated non-brominated flame retardance, hydrolytic stability, impact and heat resistance, good flow, and low specific gravity for light-weight parts. This injection molding resin is available in custom colors and meets UL 94 V-0 requirements at 1.5 mm. PX0003 may be an excellent candidate for industrial battery applications. 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-PX0003-PPEHIPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.11 g/cc	1.11 g/cc	ASTM D 792
Density	1.11 g/cc	0.0401 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.090 %	0.090 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.11 % @Temperature 23.0 ^o C	0.11 % @Temperature 73.4 ^o F	ISO 62
Linear Mold Shrinkage, Flow	0.0034 - 0.0052 cm/cm @Thickness 3.20 mm	0.0034 - 0.0052 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	36 g/10 min @Load 5.00 kg, Temperature 280 ^o C	36 g/10 min @Load 11.0 lb, Temperature 536 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	42 g/10 min @Load 5.00 kg, Temperature 280 ^o C	42 g/10 min @Load 11.0 lb, Temperature 536 ^o F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D 638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Tensile Strength, Yield	64.0 MPa	9280 psi	50 mm/min; ISO 527
	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	8.0 %	8.0 %	Type I, 50 mm/min; ASTM D 638
	8.0 %	8.0 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.75 GPa	399 ksi	5 mm/min; ASTM D 638
	3.00 GPa	435 ksi	1 mm/min; ISO 527
Flexural Yield Strength	105 MPa	15200 psi	2 mm/min; ISO 178
	110 MPa	16000 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.70 GPa	392 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.70 GPa	392 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.850 J/cm	1.59 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.20 J/cm	2.25 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	11.0 kJ/m ²	5.23 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Impact Test	40.0 J	29.5 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	75.0 μm/m-°C	41.7 μin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	75.0 μm/m-°C	41.7 μin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	84.0 μm/m-°C	46.7 μin/in-°F	ASTM E 831

Thermal Properties	Metric @Temperature -40.0 - 40.0 Â°C	English @Temperature -40.0 - 104 Â°F	Comments
	84.0 Âµm/m-Â°C	46.7 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
Deflection Temperature at 1.8 MPa (264 psi)	93.0 Â°C	199 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	92.0 Â°C	198 Â°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	112 Â°C	234 Â°F	Rate B/50; ASTM D 1525
	112 Â°C	234 Â°F	Rate B/50; ISO 306
	114 Â°C	237 Â°F	Rate B/120; ISO 306
Flammability, UL94	V-0	V-0	UL 94 by SABIC-IP
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.3	2.3	ASTM D 150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.0030	0.0030	ASTM D 150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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