

SABIC Innovative Plastics NORYL PX2060 PPE+PS

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

Material Notes:

Noryl* PX2060 is an unfilled, injection moldable modified polyphenylene ether resin. Designed for good dimensional stability and high flow , this resin also uses non-chlorinated, non-brominated FR additives to achieve a V1 UL94 rating at 1.5 mm and V0@ 2.5mm with a specific density of 1.1 g/cm³. Noryl PX2060 may be an excellent material candidate for Flat Panel TV enclosure applications requiring good rheological properties, heat resistance, hydrolysis resistance, low density and thin wall flame resistance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-PX2060-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	ASTM D792
Density	1.11 g/cc	0.0401 lb/in ³	ISO 1183
Moisture Absorption	0.0200 %	0.0200 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.13 %	0.13 %	ISO 62
Viscosity	66000 cP	66000 cP	Melt Viscosity, 280°C, 1500 sec-1; ISO 11443
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
Melt Flow	42 g/10 min @Load 3.80 kg, Temperature 200 °C	42 g/10 min @Load 8.38 lb, Temperature 392 °F	ASTM D1238
	61 g/10 min @Load 5.00 kg, Temperature 250 °C	61 g/10 min @Load 11.0 lb, Temperature 482 °F	ASTM D1238
Melt Index of Compound	20 g/10 min @Load 1.20 kg, Temperature 280 °C	20 g/10 min @Load 2.65 lb, Temperature 536 °F	MVR [cm ³ /10 min]; ISO 1133
	41 g/10 min @Load 2.16 kg, Temperature 280 °C	41 g/10 min @Load 4.76 lb, Temperature 536 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	42.0 MPa	6090 psi	50 mm/min; ISO 527
	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638

Tensile Strength, Yield Mechanical Properties	54.0 MPa Metric	7830 psi English	Type I, 50 mm/min; ASTM D638 Comments
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	11 %	11 %	50 mm/min; ISO 527
	12 %	12 %	Type I, 50 mm/min; ASTM D638
	12 %	12 %	Nominal Strain, 5 mm/min; ASTM D638
Elongation at Yield	2.9 %	2.9 %	50 mm/min; ISO 527
	3.0 %	3.0 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.20 GPa	319 ksi	50 mm/min; ASTM D638
	2.42 GPa	351 ksi	1 mm/min; ISO 527
Flexural Yield Strength	82.0 MPa	11900 psi	2 mm/min; ISO 178
	84.0 MPa	12200 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.40 GPa	348 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.53 GPa	367 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.780 J/cm	1.46 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*4; ISO 180/1A
	5.00 kJ/m ² @Temperature -30.0 °C	2.38 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	70.0 kJ/m ²	33.3 ft-lb/in ²	80*10*4; ISO 180/1U
	53.0 kJ/m ² @Temperature -30.0 °C	25.2 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	7.50 J/cm ²	35.7 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	5.00 J/cm ² @Temperature -30.0 °C	23.8 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.500 J/cm ² @Temperature -30.0 °C	2.38 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	English $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Comments
CTE, linear, Parallel to Flow	@Temperature -40.0 - 40.0 $^{\circ}\text{C}$	@Temperature -40.0 - 104 $^{\circ}\text{F}$	ASTM E 831
	83.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	46.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature -40.0 - 40.0 $^{\circ}\text{C}$	@Temperature -40.0 - 104 $^{\circ}\text{F}$	ISO 11359-2
CTE, linear, Transverse to Flow	80.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature -40.0 - 40.0 $^{\circ}\text{C}$	@Temperature -40.0 - 104 $^{\circ}\text{F}$	ISO 11359-2
	83.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	46.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature -40.0 - 40.0 $^{\circ}\text{C}$	@Temperature -40.0 - 104 $^{\circ}\text{F}$	ASTM E 831
Deflection Temperature at 1.8 MPa (264 psi)	74.0 $^{\circ}\text{C}$	165 $^{\circ}\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	80.0 $^{\circ}\text{C}$	176 $^{\circ}\text{F}$	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	91.0 $^{\circ}\text{C}$	196 $^{\circ}\text{F}$	Rate B/50; ISO 306
	93.0 $^{\circ}\text{C}$	199 $^{\circ}\text{F}$	Rate B/120; ISO 306
	105 $^{\circ}\text{C}$	221 $^{\circ}\text{F}$	Rate B/50; ASTM D1525
UL RTI, Electrical	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	UL 746B
UL RTI, Mechanical with Impact	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	UL 746B
UL RTI, Mechanical without Impact	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	UL 746B
Flammability, UL94	V-1	V-1	
	@Thickness 1.50 mm	@Thickness 0.0591 in	UL 94 by SABIC-IP
	V-0	V-0	
	@Thickness 2.50 mm	@Thickness 0.0984 in	UL 94 by SABIC-IP
Oxygen Index	28 %	28 %	ISO 4589
Glow Wire Test	700 $^{\circ}\text{C}$	1290 $^{\circ}\text{F}$	IEC 60695-2-13
	725 $^{\circ}\text{C}$	1340 $^{\circ}\text{F}$	IEC 60695-2-13
	725 $^{\circ}\text{C}$	1340 $^{\circ}\text{F}$	IEC 60695-2-13
	960 $^{\circ}\text{C}$	1760 $^{\circ}\text{F}$	
	@Thickness 1.00 mm	@Thickness 0.0394 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.60e+16 - 3.60e+16 ohm-cm	2.60e+16 - 3.60e+16 ohm-cm	ASTM D257
	2.60e+16 - 3.60e+16 ohm-cm	2.60e+16 - 3.60e+16 ohm-cm	IEC 60093
Surface Resistance	3.40e+15 - 4.50e+15 ohm	3.40e+15 - 4.50e+15 ohm	ASTM D257
	3.40e+15 - 4.50e+15 ohm	3.40e+15 - 4.50e+15 ohm	ROA; IEC 60093
Dielectric Constant	2.6	2.6	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.69	2.69	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.0023	0.0023	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.0023	0.0023	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A
	225 V	225 V	IEC 60112
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	UL 746A
High Amp Arc Ignition, HAI	60 - 120 arcs	60 - 120 arcs	UL 746A

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