

## SABIC Innovative Plastics Noryl PX7446 PPE+PS

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

### Material Notes:

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-PX7446-PPEPS.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Noryl-PX7446-PPEPS.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.19 g/cc	0.0430 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.050 %	0.050 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	0.25 % @Temperature 23.0 <sup>o</sup> C	0.25 % @Temperature 73.4 <sup>o</sup> F	ISO 62
Linear Mold Shrinkage, Flow	0.0010 - 0.0030 cm/cm @Thickness 3.20 mm	0.0010 - 0.0030 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0020 - 0.0040 cm/cm @Thickness 3.20 mm	0.0020 - 0.0040 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	10 g/10 min @Load 5.00 kg, Temperature 300 <sup>o</sup> C	10 g/10 min @Load 11.0 lb, Temperature 572 <sup>o</sup> F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133
	11.7 g/10 min @Load 5.00 kg, Temperature 300 <sup>o</sup> C	11.7 g/10 min @Load 11.0 lb, Temperature 572 <sup>o</sup> F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	112 MPa	16200 psi	Type I, 5 mm/min; ASTM D 638
	114 MPa	16500 psi	5 mm/min; ISO 527
Tensile Strength, Yield	112 MPa	16200 psi	Type I, 5 mm/min; ASTM D 638
	114 MPa	16500 psi	5 mm/min; ISO 527
Elongation at Break	2.5 %	2.5 %	5 mm/min; ISO 527
	2.9 %	2.9 %	Type I, 5 mm/min; ASTM D 638
Elongation at Yield	2.5 %	2.5 %	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Tensile Modulus	6.15 GPa	892 ksi	5 mm/min; ASTM D 638
	6.57 GPa	953 ksi	1 mm/min; ISO 527
Flexural Strength	174 MPa	25200 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Yield Strength	181 MPa	26300 psi	2 mm/min; ISO 178
Flexural Modulus	5.70 GPa	827 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	6.22 GPa	902 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.960 J/cm	1.80 ft-lb/in	ASTM D 256
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Izod Impact, Notched	1.09 J/cm	2.04 ft-lb/in	ASTM D 256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched	5.12 J/cm	9.59 ft-lb/in	ASTM D 4812
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Izod Impact, Notched (ISO)	8.00 kJ/mÂ²	3.81 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	9.00 kJ/mÂ²	4.28 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Charpy Impact, Notched	0.900 J/cmÂ²	4.28 ft-lb/inÂ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Impact Test	19.0 J	14.0 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	55.8 Âµm/m-Â°C	31.0 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	55.8 Âµm/m-Â°C	31.0 Âµin/in-Â°F	ISO 11359-2

Thermal Properties	Metric @Temperature -40.0 - 40.0 Å°C	English @Temperature -40.0 - 104 Å°F	Comments
CTE, linear, Transverse to Flow	63.9 Åµm/m-Å°C	35.5 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
	63.9 Åµm/m-Å°C	35.5 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	162 Å°C	324 Å°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	155 Å°C	311 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	156 Å°C	313 Å°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	164 Å°C	327 Å°F	Rate B/50; ASTM D 1525
	164 Å°C	327 Å°F	Rate B/50; ISO 306
	165 Å°C	329 Å°F	Rate B/120; ISO 306

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