

SABIC Innovative Plastics NORYL IGN5531 PPE+PS

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

Material Notes:

Noryl* IGN5531 is an 20% glass fiber reinforced, injection moldable grade. This modified polyphenylene ether resin is designed to deliver a balance of heat, strength and electrical properties. Noryl IGN5531 may be an excellent material candidate for ignition coils and other application requiring electrically insulating properties.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-IGN5531-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.22 g/cc	1.22 g/cc	ASTM D792
Density	1.22 g/cc	0.0441 lb/in ³	ISO 1183
Moisture Absorption	0.0200 %	0.0200 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.060 %	0.060 %	ISO 62
Linear Mold Shrinkage, Flow	0.0040 cm/cm @Thickness 3.20 mm	0.0040 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	6.4 g/10 min @Load 5.00 kg, Temperature 300 Â°C	6.4 g/10 min @Load 11.0 lb, Temperature 572 Â°F	ASTM D1238
Melt Index of Compound	5.0 g/10 min @Load 5.00 kg, Temperature 300 Â°C	5.0 g/10 min @Load 11.0 lb, Temperature 572 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	80.0 MPa	11600 psi	Type I, 5 mm/min; ASTM D638
	80.0 MPa	11600 psi	5 mm/min; ISO 527
Tensile Strength, Yield	80.0 MPa	11600 psi	Type I, 5 mm/min; ASTM D638
	80.0 MPa	11600 psi	5 mm/min; ISO 527
Elongation at Break	2.9 %	2.9 %	5 mm/min; ISO 527
	3.3 %	3.3 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	2.2 %	2.2 %	5 mm/min; ISO 527
	2.6 %	2.6 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	5.10 GPa	740 ksi	5 mm/min; ASTM D638

Mechanical Properties	Metric 9.80 GPa	English 549 ksi	Comments 1 mm/min; ISO 527
Flexural Yield Strength	135 MPa	19600 psi	1.3 mm/min, 50 mm span; ASTM D790
	140 MPa	20300 psi	2 mm/min; ISO 178
Flexural Modulus	4.50 GPa	653 ksi	1.3 mm/min, 50 mm span; ASTM D790
	5.40 GPa	783 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.00 J/cm	1.87 ft-lb/in	ASTM D256
	0.800 J/cm	1.50 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	9.00 kJ/mÂ²	4.28 ft-lb/inÂ²	80*10*4; ISO 180/1A
	7.00 kJ/mÂ²	3.33 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.900 J/cmÂ²	4.28 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	14.0 J	10.3 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	28.9 Âµm/m-Â°C	16.1 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	28.9 Âµm/m-Â°C	16.1 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
CTE, linear, Transverse to Flow	82.6 Âµm/m-Â°C	45.9 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	82.6 Âµm/m-Â°C	45.9 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)	150 Â°C	302 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	149 Â°C	300 Â°F	

Thermal Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	unannealed; ASTM D648 Comments
Vicat Softening Point	158 Â°C	316 Â°F	Rate B/50; ASTM D1525
	158 Â°C	316 Â°F	Rate B/50; ISO 306
	159 Â°C	318 Â°F	Rate B/120; ISO 306

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