

SABIC Innovative Plastics NORYL NH7111E PPE+HIPS (Asia Pacific)

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

Material Notes:

Noryl* EXNL0280 is a glass fiber reinforced, injection moldable modified polyphenylene ether resin. Designed for good dimensional stability and low warpage, this resin also uses non-halogenated FR additives to achieve a V1 UL94 rating at 1.6 mm and V0 UL94 at 3.00mm with a CTI value of 400 V. Noryl EXNL0280 may be an excellent material candidate for application requiring electrically insulating properties, low moisture absorption, low warpage and thin wall flame resistance. Available in limited light grey colors

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-NH7111E-PPEHIPS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.24 g/cc	1.24 g/cc	ASTM D792
Density	1.24 g/cc	0.0448 lb/in ³	ISO 1183
Moisture Absorption	0.0700 %	0.0700 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.23 %	0.23 %	ISO 62
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	18 g/10 min @Load 5.00 kg, Temperature 300 ^o C	18 g/10 min @Load 11.0 lb, Temperature 572 ^o F	ASTM D1238
Melt Index of Compound	15 g/10 min @Load 5.00 kg, Temperature 280 ^o C	15 g/10 min @Load 11.0 lb, Temperature 536 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	66.0 MPa	9570 psi	Type I, 5 mm/min; ASTM D638
	75.0 MPa	10900 psi	5 mm/min; ISO 527
Tensile Strength, Yield	69.0 MPa	10000 psi	Type I, 5 mm/min; ASTM D638
	76.0 MPa	11000 psi	5 mm/min; ISO 527
Elongation at Break	3.6 %	3.6 %	5 mm/min; ISO 527
	4.5 %	4.5 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	3.2 %	3.2 %	Type I, 5 mm/min; ASTM D638
	3.4 %	3.4 %	5 mm/min; ISO 527

Mechanical Properties	Metric ^{MPa}	English	Comments ^{ASTM D638}
	3.79 GPa	550 ksi	1 mm/min; ISO 527
Flexural Yield Strength	120 MPa	17400 psi	1.3 mm/min, 50 mm span; ASTM D790
	127 MPa	18400 psi	2 mm/min; ISO 178
Flexural Modulus	3.57 GPa	518 ksi	1.3 mm/min, 50 mm span; ASTM D790
	3.62 GPa	525 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.450 J/cm	0.843 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	7.00 kJ/m ²	3.33 ft-lb/in ²	80*10*4; ISO 180/1A
Charpy Impact, Notched	2.60 J/cm ²	12.4 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	10.0 J @Temperature 23.0 Â°C	7.38 ft-lb @Temperature 73.4 Â°F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	43.5 Âµm/m-Â°C	24.2 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	43.5 Âµm/m-Â°C	24.2 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	70.9 Âµm/m-Â°C	39.4 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	70.9 Âµm/m-Â°C	39.4 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)	140 Â°C	284 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/ Af
	140 Â°C @Thickness 3.20 mm	284 Â°F @Thickness 0.126 in	
Vicat Softening Point	149 Â°C	300 Â°F	Rate B/50; ASTM D1525
	155 Â°C	311 Â°F	

Thermal Properties	V-1 Metric	V-1 English	Comments SABIC-IP
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	V-0	V-0	UL 94 by SABIC-IP
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	775 Â°C	1430 Â°F	IEC 60695-2-13
	775 Â°C	1430 Â°F	IEC 60695-2-13
	775 Â°C	1430 Â°F	IEC 60695-2-13
	775 Â°C	1430 Â°F	IEC 60695-2-13
	960 Â°C	1760 Â°F	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.0e+14 - 1.0e+16 ohm-cm	1.0e+14 - 1.0e+16 ohm-cm	IEC 60093
Surface Resistance	3.00e+13 - 5.00e+13 ohm	3.00e+13 - 5.00e+13 ohm	ROA; IEC 60093
Dielectric Constant	2.9	2.9	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	27.3 kV/mm	693 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Comparative Tracking Index	400 V	400 V	IEC 60112
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL 746A
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A

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