

SABIC Innovative Plastics NORYL NH5110E PPE+PS (Europe-Africa-Middle East)

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

Material Notes:

NORYL NH5110E is a flame retardant, non halogenated, impact modified extrusion grade. Developed for low beard-growth, with a Vicat B/120 of 138 Deg C, according to ISO 306 and a UL-94 rating of V1@ 1.5mm, it would be suitable for electrical conduit and cable management applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-NH5110E-PPEPS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.09 g/cc	0.0394 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.15 %	0.15 %	ISO 62
Melt Index of Compound	9.0 g/10 min @Load 5.00 kg, Temperature 280 ^o C	9.0 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	52.0 MPa	7540 psi	50 mm/min; ISO 527
Tensile Strength, Yield	64.0 MPa	9280 psi	50 mm/min; ISO 527
Elongation at Break	18 %	18 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527
Tensile Modulus	2.50 GPa	363 ksi	1 mm/min; ISO 527
Flexural Yield Strength	98.0 MPa	14200 psi	2 mm/min; ISO 178
Flexural Modulus	2.40 GPa	348 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	24.0 kJ/m ²	11.4 ft-lb/in ²	80*10*4; ISO 180/1A
	9.00 kJ/m ² @Temperature -30.0 ^o C	4.28 ft-lb/in ² @Temperature -22.0 ^o F	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
	1.10 J/cm ² @Temperature -30.0	5.23 ft-lb/in ² @Temperature -22.0	Edgew 80*10*4 sp=62mm; ISO 179/1eA

Mechanical Properties	°C Metric	°F English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	82.0 Åµm/m-Å°C @Temperature 23.0 - 80.0 Å°C	45.6 Åµin/in-Å°F @Temperature 73.4 - 176 Å°F	ASTM E 831
	82.0 Åµm/m-Å°C @Temperature 23.0 - 80.0 Å°C	45.6 Åµin/in-Å°F @Temperature 73.4 - 176 Å°F	ISO 11359-2
CTE, linear, Transverse to Flow	94.0 Åµm/m-Å°C @Temperature 23.0 - 80.0 Å°C	52.2 Åµin/in-Å°F @Temperature 73.4 - 176 Å°F	ASTM E 831
	94.0 Åµm/m-Å°C @Temperature 23.0 - 80.0 Å°C	52.2 Åµin/in-Å°F @Temperature 73.4 - 176 Å°F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	129 Å°C	264 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	114 Å°C	237 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
Vicat Softening Point	138 Å°C	280 Å°F	Rate B/120; ISO 306
	149 Å°C	300 Å°F	Rate B/50; ISO 306
UL RTI, Electrical	65.0 Å°C	149 Å°F	UL 746B
UL RTI, Mechanical with Impact	65.0 Å°C	149 Å°F	UL 746B
UL RTI, Mechanical without Impact	65.0 Å°C	149 Å°F	UL 746B
Flammability, UL94	V-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	UL 94
Oxygen Index	34 %	34 %	ISO 4589

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.6 @Frequency 1.00e+6 Hz	2.6 @Frequency 1.00e+6 Hz	ASTM D150
	2.6 @Frequency 1.00e+6 Hz	2.6 @Frequency 1.00e+6 Hz	IEC 60250
	46.0 kV/mm	1170 kV/in	

Dielectric Strength Electrical Properties	Metric @ Thickness 1.00 mm	English @ Thickness 0.0394 in	short time IEC 60243-1 Comments
Dissipation Factor	0.0017	0.0017	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.0017	0.0017	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
Ball Pressure Test, 125Â°C +/- 2Â°C	Pass	IEC 60695-10-2

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