

SABIC Innovative Plastics NORYL V02570 PPE+HIPS

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

Material Notes:

Noryl* V02570 is a 25% milled fiber reinforced, injection moldable grade. Designed for good dimensional stability and low warpage, this resin also uses non-chlorinated, non-brominated FR additives to achieve a V0 UL94 rating at 1.0 mm. Noryl V02570 is may be an excellent material candidate for application requiring electrically insulating properties, low warpage and thin wall flame resistance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-V02570-PPEHIPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.35 g/cc	1.35 g/cc	ASTM D792
Density	1.35 g/cc	0.0488 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.25 %	0.25 %	ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm	0.0030 - 0.0050 in/in	on Tensile Bar; SABIC Method
	0.0030 - 0.0050 cm/cm @Thickness 3.20 mm	0.0030 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	12 g/10 min @Load 5.00 kg, Temperature 300 ^o C	12 g/10 min @Load 11.0 lb, Temperature 572 ^o F	ASTM D1238
Melt Index of Compound	8.0 g/10 min @Load 5.00 kg, Temperature 300 ^o C	8.0 g/10 min @Load 11.0 lb, Temperature 572 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	115 MPa	16700 psi	ISO 2039-1
Tensile Strength at Break	73.0 MPa	10600 psi	5 mm/min; ISO 527
	75.0 MPa	10900 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	73.0 MPa	10600 psi	5 mm/min; ISO 527
	75.0 MPa	10900 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	4.0 %	4.0 %	Type I, 5 mm/min; ASTM D638
	4.0 %	4.0 %	5 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	Type I, 5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
			5 mm/min; ISO 527
Tensile Modulus	3.60 GPa	522 ksi	5 mm/min; ASTM D638
	4.70 GPa	682 ksi	1 mm/min; ISO 527
Flexural Strength	115 MPa	16700 psi	2 mm/min; ISO 178
Flexural Yield Strength	120 MPa	17400 psi	1.3 mm/min, 50 mm span; ASTM D790
	123 MPa	17800 psi	2 mm/min; ISO 178
Flexural Modulus	3.80 GPa	551 ksi	1.3 mm/min, 50 mm span; ASTM D790
	3.80 GPa	551 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.350 J/cm	0.656 ft-lb/in	ASTM D256
	0.350 J/cm	0.656 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	ASTM D256
Izod Impact, Unnotched (ISO)	25.0 kJ/m ²	11.9 ft-lb/in ²	80*10*4; ISO 180/1U
	25.0 kJ/m ²	11.9 ft-lb/in ²	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	3.00 J/cm ²	14.3 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.00 J/cm ²	14.3 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Dart Drop, Total Energy	9.00 J	6.64 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	45.0 Åµm/m-Å°C	25.0 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	ASTM E 831
	50.0 Åµm/m-Å°C	27.8 Åµin/in-Å°F	ISO 11359-2
	@Temperature 23.0 - 80.0 Å°C	@Temperature 73.4 - 176 Å°F	ISO 11359-2
CTE, linear, Transverse to Flow	50.0 Åµm/m-Å°C	27.8 Åµin/in-Å°F	ASTM E 831

Thermal Properties	Metric @Temperature -40.0 - 40.0 Â°C	English @Temperature -40.0 - 100 Â°F	Comments
	50.0 Âµm/m-Â°C	27.8 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 80.0 Â°C	@Temperature 73.4 - 176 Â°F	
Thermal Conductivity	0.280 W/m-K	1.94 BTU-in/hr-ftÂ²- Â°F	ISO 8302
Hot Ball Pressure Test	<= 155 Â°C	<= 311 Â°F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	155 Â°C	311 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	145 Â°C	293 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	148 Â°C	298 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	160 Â°C	320 Â°F	Rate B/50; ISO 306
	165 Â°C	329 Â°F	Rate B/50; ASTM D1525
	167 Â°C	333 Â°F	Rate B/120; ISO 306
UL RTI, Electrical	50.0 Â°C	122 Â°F	UL 746B
UL RTI, Mechanical with Impact	50.0 Â°C	122 Â°F	UL 746B
UL RTI, Mechanical without Impact	50.0 Â°C	122 Â°F	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Oxygen Index	32 %	32 %	ISO 4589
Glow Wire Test	775 Â°C	1430 Â°F	IEC 60695-2-13
	775 Â°C	1430 Â°F	IEC 60695-2-13
	825 Â°C	1520 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	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
	2.9	2.9	

Electrical Properties	Metric	English	Comments
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.0	3.0	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	18.0 kV/mm	457 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	26.0 kV/mm	660 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	33.0 kV/mm	838 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.0040	0.0040	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.0050	0.0050	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
High Voltage Arc Resistance to Ignition (HVAR)	0.00 - 30 sec	0.00 - 30 sec	UL 746A
Comparative Tracking Index	250 V	250 V	IEC 60112
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL 746A
High Amp Arc Ignition, HAI	60 - 120 arcs	60 - 120 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL 746A

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

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