

SABIC Innovative Plastics NORYL V0150B PPE+HIPS (Asia Pacific)

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

Material Notes:

Noryl* V0150B is an unfilled, injection moldable modified polyphenylene ether resin.. Designed for high heat resistance and thin wall FR performance, this resin delivers a UL94 V0 rating at 1.5 mm and a UL94 5Va rating at 2.0 mm. Noryl V0150B is also halogen free according to VDE/DIN 472 part 815 and may be an excellent material candidate where flame resistance and high temperature resistance is required.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-V0150B-PPEHIPS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.11 g/cc	1.11 g/cc	ASTM D792
Density	1.11 g/cc	0.0401 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.18 %	0.18 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on Tensile Bar; SABIC Method
	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	3.5 g/10 min	3.5 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 280 ^o C	@Load 11.0 lb, Temperature 536 ^o F	
Melt Index of Compound	10 g/10 min	10 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 300 ^o C	@Load 11.0 lb, Temperature 572 ^o F	

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	113 MPa	16400 psi	ISO 2039-1
Tensile Strength at Break	55.0 MPa	7980 psi	50 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	70.0 MPa	10200 psi	Type I, 50 mm/min; ASTM D638
	70.0 MPa	10200 psi	50 mm/min; ISO 527
Elongation at Break	7.0 %	7.0 %	Type I, 50 mm/min; ASTM D638
	10 %	10 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
	5.0 Å	5.0 Å	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.50 GPa	363 ksi	5 mm/min; ASTM D638
	2.50 GPa	363 ksi	1 mm/min; ISO 527
Flexural Yield Strength	105 MPa	15200 psi	1.3 mm/min, 50 mm span; ASTM D790
	110 MPa	16000 psi	2 mm/min; ISO 178
Flexural Modulus	2.40 GPa	348 ksi	2 mm/min; ISO 178
	2.55 GPa	370 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	3.30 J/cm	6.18 ft-lb/in	ASTM D256
	1.80 J/cm	3.37 ft-lb/in	
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	ASTM D256
Izod Impact, Notched (ISO)	13.0 kJ/mÅ²	6.19 ft-lb/inÅ²	80*10*4; ISO 180/1A
	5.00 kJ/mÅ²	2.38 ft-lb/inÅ²	
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.40 J/cmÅ²	6.66 ft-lb/inÅ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.500 J/cmÅ²	2.38 ft-lb/inÅ²	
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	50.0 J	36.9 ft-lb	
	@Temperature 23.0 Å°C	@Temperature 73.4 Å°F	ASTM D3763
Taber Abrasion, mg/1000 Cycles	35	35	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 Åµm/m-Å°C	38.9 Åµin/in-Å°F	
	@Temperature 23.0 - 80.0 Å°C	@Temperature 73.4 - 176 Å°F	ISO 11359-2
	75.0 Åµm/m-Å°C	41.7 Åµin/in-Å°F	
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	ASTM E 831
CTE, linear, Transverse to Flow	75.0 Åµm/m-Å°C	41.7 Åµin/in-Å°F	
			ASTM E 831

Thermal Properties	Metric @Temperature -40.0 - 40.0 Â°C	English @Temperature -40.0 - 104 Â°F	Comments
	90.0 Âµm/m-Â°C	50.0 Âµin/in-Â°F	
	@Temperature 23.0 - 80.0 Â°C	@Temperature 73.4 - 176 Â°F	ISO 11359-2
Thermal Conductivity	0.270 W/m-K	1.87 BTU-in/hr-ftÂ²- Â°F	ISO 8302
Hot Ball Pressure Test	<= 140 Â°C	<= 284 Â°F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	140 Â°C	284 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	130 Â°C	266 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	135 Â°C	275 Â°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	145 Â°C	293 Â°F	Rate B/50; ISO 306
	155 Â°C	311 Â°F	Rate B/120; ISO 306
	155 Â°C	311 Â°F	Rate B/50; ASTM D1525
	160 Â°C	320 Â°F	Rate A/50; ISO 306
UL RTI, Electrical	110 Â°C	230 Â°F	UL 746B
UL RTI, Mechanical with Impact	105 Â°C	221 Â°F	UL 746B
UL RTI, Mechanical without Impact	115 Â°C	239 Â°F	UL 746B
Flammability, UL94	V-0	V-0	
	@Thickness 1.50 mm	@Thickness 0.0591 in	UL 94
	5VA	5VA	
	@Thickness 2.00 mm	@Thickness 0.0787 in	UL 94
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
	775 Â°C	1430 Â°F	IEC 60695-2-13
	960 Â°C	1760 Â°F	
	@Thickness 1.00 mm	@Thickness 0.0394 in	IEC 60695-2-12

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
Dielectric Constant	2.7	2.7	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.8	2.8	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	16.0 kV/mm	406 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	0.00090	0.00090	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0030	0.0030	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	250 V	250 V	IEC 60112

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

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