

SABIC Innovative Plastics NORYL V01525 PPE+HIPS

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

Material Notes:

Noryl* V01525 is a 15% 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 1.60 mm. Noryl V01525 is may be an excellent material candidate for application requiring low warpage and thin wall FR performance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-V01525-PPEHIPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.13 g/cc	1.13 g/cc	ASTM D792
Density	1.25 g/cc	0.0452 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.45 %	0.45 %	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	24 g/10 min @Load 5.00 kg, Temperature 300 ^o C	24 g/10 min @Load 11.0 lb, Temperature 572 ^o F	ASTM D1238
Melt Index of Compound	10 g/10 min @Load 5.00 kg, Temperature 280 ^o C	10 g/10 min @Load 11.0 lb, Temperature 536 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	140 MPa	20300 psi	ISO 2039-1
Tensile Strength at Break	55.0 MPa	7980 psi	5 mm/min; ISO 527
	66.0 MPa	9570 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	58.0 MPa	8410 psi	5 mm/min; ISO 527
	69.0 MPa	10000 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	5.0 %	5.0 %	Type I, 5 mm/min; ASTM D638
	5.0 %	5.0 %	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	3.10 GPa	450 ksi	5 mm/min; ASTM D638
	3.10 GPa	450 ksi	1 mm/min; ISO 527
Flexural Strength	100 MPa	14500 psi	2 mm/min; ISO 178
Flexural Yield Strength	115 MPa	16700 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	3.00 GPa	435 ksi	2 mm/min; ISO 178
	3.20 GPa	464 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.500 J/cm	0.937 ft-lb/in	ASTM D256
	0.550 J/cm	1.03 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	35.0 kJ/m ²	16.7 ft-lb/in ²	80*10*4; ISO 180/1U
	30.0 kJ/m ²	14.3 ft-lb/in ²	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	4.00 J/cm ²	19.0 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	4.00 J/cm ²	19.0 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	8.00 J	5.90 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Taber Abrasion, mg/1000 Cycles	75	75	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	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	
	66.0 Åµm/m-Å°C	36.7 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
CTE, linear, Transverse to Flow	52.0 Åµm/m-Å°C	28.9 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
	60.0 Âµm/m-Â°C	33.3 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	<= 125 Â°C	<= 257 Â°F	IEC 60695-10-2
Deflection Temperature at 1.8 MPa (264 psi)	115 Â°C	239 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	120 Â°C	248 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	130 Â°C	266 Â°F	Rate B/50; ISO 306
	140 Â°C	284 Â°F	Rate B/120; ISO 306
	140 Â°C	284 Â°F	Rate B/50; ASTM D1525
	140 Â°C	284 Â°F	Rate A/50; 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-1	V-1	UL 94
	@Thickness 1.20 mm	@Thickness 0.0472 in	
	V-0	V-0	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	5VA	5VA	UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	32 %	32 %	ISO 4589
Glow Wire Test	960 Â°C	1760 Â°F	IEC 60695-2-12
	@Thickness 3.20 mm	@Thickness 0.126 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

Electrical Properties	Metric	English	Comments
Dielectric Constant	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
	3.0	3.0	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
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	0.0030	0.0030	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.0060	0.0060	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Comparative Tracking Index	175 V	175 V	IEC 60112

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

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