SABIC Innovative Plastics Noryl V01505 PPE+HIPS (Asia Pacific)

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO , Polystyrene (PS) , Polystyrene + Polyphenylene Ether, Unreinforced , Polystyrene, Impact Modified

Material Notes:

Noryl* V01505 is a 15% milled fibre 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 2.0 mm and a UL94 V1 rating at 1.5 mm. Noryl V01505 is may be an excellent material candidate for application requiring low warpage and flame resistance.This data was supplied by SABIC-IP for the Asia Pacific region.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Noryl-V01505-PPEHIPS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.25 g/cc	1.25 g/cc	ASTM D 792
Density	1.25 g/cc	0.0452 lb/inÂ³	ISO 1183
Moisture Absorption at Equilibrium	0.060 %	0.060 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.40 % @Temperature 23.0 Â°C	0.40 % @Temperature 73.4 Â°F	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	15 g/10 min @Load 3.80 kg, Temperature 280 Â°C	15 g/10 min @Load 8.38 lb, Temperature 536 Â°F	[cm^3/10 min] Melt Volume Rate; ISO 1133
	42 g/10 min @Load 5.00 kg, Temperature 300 Â°C	42 g/10 min @Load 11.0 lb, Temperature 572 Â°F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	135 MPa	19600 psi	ISO 2039-1
Tensile Strength at Break	50.0 MPa	7250 psi	Type I, 5 mm/min; ASTM D 638
	50.0 MPa	7250 psi	5 mm/min; ISO 527
Tensile Strength, Yield	50.0 MPa	7250 psi	Type I, 5 mm/min; ASTM D 638
	50.0 MPa	7250 psi	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Elongation at Break	6.0 %	6.0 %	Type I, 5 mm/min; ASTM D 638
	10 %	10 %	5 mm/min; ISO 527
Elongation at Yield	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D 638
	5.0 %	5.0 %	5 mm/min; ISO 527
Tensile Modulus	3.10 GPa	450 ksi	5 mm/min; ASTM D 638
	3.30 GPa	479 ksi	1 mm/min; ISO 527
Flexural Strength	85.0 MPa	12300 psi	2 mm/min; ISO 178
Flexural Yield Strength	98.0 MPa	14200 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	3.00 GPa	435 ksi	2 mm/min; ISO 178
	3.10 GPa	450 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.450 J/cm @Temperature -30.0 Â°C	0.843 ft-lb/in @Temperature -22.0 Â°F	ASTM D 256
	0.500 J/cm @Temperature 23.0 Â°C	0.937 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched (ISO)	20.0 kJ/mÂ² @Temperature -30.0 Â°C	9.52 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1U
	25.0 kJ/mÂ² @Temperature 23.0 Â°C	11.9 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	3.00 J/cmÂ² @Temperature 23.0 Â°C	14.3 ft-lb/inÂ² @Temperature 73.4 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.00 J/cmÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Impact Test	11.0 J @Temperature 23.0 Â°C	8.11 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763
Taber Abrasion, mg/1000 Cycles	75 @Load 1.00 kg	75 @Load 2.20 lb	CS-17; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	22.2 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
	74.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	41.1 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
CTE, linear, Transverse to Flow	52.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	28.9 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	60.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	33.3 Âµin/in-Â°F @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	<= 105 Â°C	<= 221 Â°F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	110 Â°C	230 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	100 Â°C	212 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	97.0 Â°C @Thickness 3.20 mm	207 Â°F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	110 Â°C	230 Â°F	Rate B/50; ISO 306
	120 Â°C	248 Â°F	Rate B/50; ASTM D 1525
	125 Â°C	257 Â°F	Rate A/50; ISO 306
	125 Â°C	257 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-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	UL 94
	V-0 @Thickness 2.00 mm	V-0 @Thickness 0.0787 in	UL 94
Oxygen Index	32 %	32 %	LOI; ISO 4589

Thermal Properties	Metric	English	Comments
Glow Wire Test	960 °C @Thickness 3.20 mm	1760 °F @Thickness 0.126 in	Glow Wire Flammability Index; 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 @Frequency 1.00e+6 Hz	2.7 @Frequency 1.00e+6 Hz	IEC 60250
	2.8 @Frequency 50.0 - 60.0 Hz	2.8 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	16.0 kV/mm @Thickness 3.20 mm	406 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	26.0 kV/mm @Thickness 1.60 mm	660 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
	33.0 kV/mm @Thickness 0.800 mm	838 kV/in @Thickness 0.0315 in	in oil; IEC 60243-1
Dissipation Factor	0.0050 @Frequency 1.00e+6 Hz	0.0050 @Frequency 1.00e+6 Hz	IEC 60250
	0.010 @Frequency 50.0 - 60.0 Hz	0.010 @Frequency 50.0 - 60.0 Hz	IEC 60250

Descriptive Properties	Value	Comments
Ball Pressure Test, 75Â°C +/- 2Â°C	PASSES	IEC 60695-10-2

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