

SABIC Innovative Plastics NORYL GTX GTX973 PPE+PA

Category : Polymer , Thermoplastic , Nylon , Polyphenylene Ether/PPO

Material Notes:

NORYL GTX973 is a material especially designed for electrostatic painting and powder coating applications. The material combines high heat resistance with impact and conductivity in a unique way.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GTX-GTX973-PPEPA.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.09 g/cc	1.09 g/cc	ASTM D792
Density	1.10 g/cc	0.0397 lb/in ³	ISO 1183
Moisture Absorption	1.20 %	1.20 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	4.2 %	4.2 %	ISO 62
Linear Mold Shrinkage, Flow	0.014 - 0.017 cm/cm @Thickness 3.20 mm	0.014 - 0.017 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.012 - 0.015 cm/cm @Thickness 3.20 mm	0.012 - 0.015 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	20 g/10 min @Load 5.00 kg, Temperature 280 Â°C	20 g/10 min @Load 11.0 lb, Temperature 536 Â°F	ASTM D1238
Melt Index of Compound	12 g/10 min @Load 5.00 kg, Temperature 280 Â°C	12 g/10 min @Load 11.0 lb, Temperature 536 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Tensile Strength, Yield	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
	60.0 MPa	8700 psi	50 mm/min; ISO 527
Elongation at Break	30 %	30 %	50 mm/min; ISO 527
	55 %	55 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527
	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.20 GPa	312 ksi	50 mm/min; ASTM D638
	2.30 GPa	334 ksi	1 mm/min; ISO 527
Flexural Yield Strength	90.0 MPa	13100 psi	1.3 mm/min, 50 mm span; ASTM D790
	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.30 J/cm	2.44 ft-lb/in	ASTM D256
	0.800 J/cm	1.50 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	15.0 kJ/mÂ²	7.14 ft-lb/inÂ²	80*10*4; ISO 180/1A
	7.00 kJ/mÂ²	3.33 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	1.50 J/cmÂ²	7.14 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.600 J/cmÂ²	2.86 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Dart Drop, Total Energy	50.0 J	36.9 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	85.0 Âµm/m-Â°C	47.2 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	90.0 Âµm/m-Â°C	50.0 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 60.0 Â°C	@Temperature 73.4 - 140 Â°F	
CTE, linear, Transverse to Flow	90.0 Âµm/m-Â°C	50.0 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	90.0 Âµm/m-Â°C	50.0 Âµin/in-Â°F	

Thermal Properties	Metric @ Temperature 23.0 - 60.0 Â°C	English @ Temperature 73.4 - 140 Â°F	ISO 11359-2 Comments
Deflection Temperature at 0.46 MPa (66 psi)	190 Â°C	374 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	195 Â°C @ Thickness 3.20 mm	383 Â°F @ Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	195 Â°C	383 Â°F	Rate B/50; ISO 306
	200 Â°C	392 Â°F	Rate B/120; ISO 306
	200 Â°C	392 Â°F	Rate B/50; ASTM D1525

Electrical Properties	Metric	English	Comments
Volume Resistivity	1000 - 10000 ohm-cm	1000 - 10000 ohm-cm	SABIC Method

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

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