

SABIC Innovative Plastics NORYL GTX GTX974 PPE+PA

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

Material Notes:

NORYL GTX974 is a material especially designed for in- or on-line painted bodypanels and fenders in particular. This material combines impact performance with conductivity for electro-static painting in an unique way.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GTX-GTX974-PPEPA.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.08 g/cc	1.08 g/cc	ASTM D792
Density	1.08 g/cc	0.0390 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	0.013 - 0.016 cm/cm @Thickness 3.20 mm	0.013 - 0.016 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.011 - 0.014 cm/cm @Thickness 3.20 mm	0.011 - 0.014 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	10 g/10 min @Load 5.00 kg, Temperature 280 Â°C	10 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	45.0 MPa	6530 psi	50 mm/min; ISO 527
	50.0 MPa	7250 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	50.0 MPa	7250 psi	50 mm/min; ISO 527
	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	30 %	30 %	50 mm/min; ISO 527
	50 %	50 %	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	2.00 GPa	290 ksi	1 mm/min; ISO 527
	2.05 GPa	297 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	75.0 MPa	10900 psi	2 mm/min; ISO 178
	80.0 MPa	11600 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	1.90 GPa	276 ksi	2 mm/min; ISO 178
	2.05 GPa	297 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.80 J/cm	3.37 ft-lb/in	ASTM D256
	1.20 J/cm	2.25 ft-lb/in	
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	ASTM D256
Izod Impact, Notched (ISO)	17.0 kJ/mÅ²	8.09 ft-lb/inÅ²	80*10*4; ISO 180/1A
	10.0 kJ/mÅ²	4.76 ft-lb/inÅ²	
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.80 J/cmÅ²	8.57 ft-lb/inÅ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.00 J/cmÅ²	4.76 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

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 Åµm/m-Å°C	50.0 Åµin/in-Å°F	
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	ASTM E 831
	100 Åµm/m-Å°C	55.6 Åµin/in-Å°F	
	@Temperature 23.0 - 60.0 Å°C	@Temperature 73.4 - 140 Å°F	ISO 11359-2
CTE, linear, Transverse to Flow	90.0 Åµm/m-Å°C	50.0 Åµin/in-Å°F	
	@Temperature 23.0 - 60.0 Å°C	@Temperature 73.4 - 140 Å°F	ISO 11359-2
	100 Åµm/m-Å°C	55.6 Åµin/in-Å°F	

Thermal Properties	Metric @ Temperature -40.0 - 40.0 Â°C	English @ Temperature -40.0 - 104 Â°F	ASTM F 831 Comments
Deflection Temperature at 0.46 MPa (66 psi)	175 Â°C	347 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	180 Â°C	356 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	175 Â°C	347 Â°F	Rate B/50; ISO 306
	180 Â°C	356 Â°F	Rate B/120; ISO 306
	180 Â°C	356 Â°F	Rate B/50; ASTM D1525
	230 Â°C	446 Â°F	Rate A/50; ISO 306
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	

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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