

SABIC Innovative Plastics Noryl GTX GTX979 PPE+PA

Category : Polymer , Thermoplastic , Polyester, TP , Polyphenylene Ether/PPO

Material Notes:

NORYL GTX979 is a conductive, high heat material. It is especially designed for in- and on-line painted bodypanels and fenders in particular, with conductivity for electro-static painting in an unique way. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Noryl-GTX-GTX979-PPEPA.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.08 g/cc	1.08 g/cc	ASTM D 792
Density	1.08 g/cc	0.0390 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	1.2 %	1.2 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	4.2 % @Temperature 23.0 ^o C	4.2 % @Temperature 73.4 ^o F	ISO 62
Linear Mold Shrinkage, Flow	0.012 - 0.016 cm/cm @Thickness 3.20 mm	0.012 - 0.016 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.012 - 0.016 cm/cm @Thickness 3.20 mm	0.012 - 0.016 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	11 g/10 min @Load 5.00 kg, Temperature 280 ^o C	11 g/10 min @Load 11.0 lb, Temperature 536 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	15 g/10 min @Load 5.00 kg, Temperature 280 ^o C	15 g/10 min @Load 11.0 lb, Temperature 536 ^o F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	50.0 MPa	7250 psi	Type I, 50 mm/min; ASTM D 638
	50.0 MPa	7250 psi	50 mm/min; ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D 638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	30 %	30 %	50 mm/min; ISO 527
	60 %	60 %	Type I, 50 mm/min; ASTM D 638

Elongation at Yield Mechanical Properties	4.0 % Metric	4.0 % English	50 mm/min; ISO 527 Comments
	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.00 GPa	290 ksi	50 mm/min; ASTM D 638
	2.10 GPa	305 ksi	1 mm/min; ISO 527
Flexural Yield Strength	80.0 MPa	11600 psi	1.3 mm/min, 50 mm span; ASTM D 790
	80.0 MPa	11600 psi	2 mm/min; ISO 178
Flexural Modulus	2.05 GPa	297 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.15 GPa	312 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.50 J/cm @Temperature -30.0 °C	2.81 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	2.20 J/cm @Temperature 23.0 °C	4.12 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	7.00 kJ/m ² @Temperature -30.0 °C	3.33 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	17.0 kJ/m ² @Temperature 23.0 °C	8.09 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	80*10*4; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact, Notched	1.20 J/cm ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	2.00 J/cm ² @Temperature 23.0 °C	9.52 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	50.0 J @Temperature 23.0	36.9 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Mechanical Properties	Metric	English	Comments
Thermal Properties	Metric	English	Comments
	English	Metric	Comments
CTE, linear, Parallel to Flow	95.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	52.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	96.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	53.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 176 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	96.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	53.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 176 $\text{Å}^\circ\text{F}$	
	100 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	178 $\text{Å}^\circ\text{C}$	352 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Be
	185 $\text{Å}^\circ\text{C}$	365 $\text{Å}^\circ\text{F}$	
Vicat Softening Point	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
	180 $\text{Å}^\circ\text{C}$	356 $\text{Å}^\circ\text{F}$	
	180 $\text{Å}^\circ\text{C}$	356 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D 1525
	182 $\text{Å}^\circ\text{C}$	360 $\text{Å}^\circ\text{F}$	
Glow Wire Test	650 $\text{Å}^\circ\text{C}$	1200 $\text{Å}^\circ\text{F}$	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	

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

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