

SABIC Innovative Plastics NORYL GTX GTX944 PPE+PA (Asia Pacific)

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

Material Notes:

NORYL GTX944 is an unfilled GTX grade with improved processability and increased impact performance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GTX-GTX944-PPEPA-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.08 g/cc	1.08 g/cc	ASTM D792
Density	1.07 g/cc	0.0387 lb/in ³	ISO 1183
Moisture Absorption	1.20 %	1.20 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	3.5 %	3.5 %	ISO 62
Linear Mold Shrinkage, Flow	0.014 - 0.018 cm/cm	0.014 - 0.018 in/in	on Tensile Bar; SABIC Method
	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	0.011 - 0.014 cm/cm @Thickness 3.20 mm	0.011 - 0.014 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	12.5 g/10 min @Load 5.00 kg, Temperature 280 ^o C	12.5 g/10 min @Load 11.0 lb, Temperature 536 ^o F	ASTM D1238
Melt Index of Compound	12 g/10 min @Load 5.00 kg, Temperature 280 ^o C	12 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	75.0 MPa	10900 psi	ISO 2039-1
Tensile Strength at Break	45.0 MPa	6530 psi	Type I, 50 mm/min; ASTM D638
	45.0 MPa	6530 psi	50 mm/min; ISO 527
Tensile Strength, Yield	50.0 MPa	7250 psi	Type I, 50 mm/min; ASTM D638
	50.0 MPa	7250 psi	50 mm/min; ISO 527
Elongation at Break	50 %	50 %	50 mm/min; ISO 527
	100 %	100 %	Type I, 50 mm/min; ASTM D638

Elongation at Yield Mechanical Properties	3.5 % Metric	3.5 % English	50 mm/min; ISO 527 Comments
	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	1.90 GPa	276 ksi	50 mm/min; ASTM D638
	2.00 GPa	290 ksi	1 mm/min; ISO 527
Flexural Yield Strength	75.0 MPa	10900 psi	1.3 mm/min, 50 mm span; ASTM D790
	75.0 MPa	10900 psi	2 mm/min; ISO 178
Flexural Modulus	1.90 GPa	276 ksi	2 mm/min; ISO 178
	1.95 GPa	283 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.80 J/cm	12.7 ft-lb/in	ASTM D256
	2.80 J/cm	5.25 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	55.0 kJ/mÂ²	26.2 ft-lb/inÂ²	80*10*4; ISO 180/1A
	25.0 kJ/mÂ²	11.9 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -20.0 Â°C	@Temperature -4.00 Â°F	
	25.0 kJ/mÂ²	11.9 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	5.50 J/cmÂ²	26.2 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	2.50 J/cmÂ²	11.9 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	55.0 J	40.6 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel 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	ISO 11359-2
	@Temperature 23.0 -	@Temperature 73.4 -	

Thermal Properties	60.0 Å°C Metric	140 Å°F English	Comments
CTE, linear, Transverse to Flow	90.0 Åµm/m-Å°C	50.0 Åµin/in-Å°F	ISO 11359-2
	@Temperature 23.0 - 60.0 Å°C	@Temperature 73.4 - 140 Å°F	
	100 Åµm/m-Å°C	55.6 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Thermal Conductivity	0.240 W/m-K	1.67 BTU-in/hr-ftÅ²-Å°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	175 Å°C	347 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	185 Å°C	365 Å°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	180 Å°C	356 Å°F	Rate B/50; ASTM D1525
	180 Å°C	356 Å°F	Rate B/50; ISO 306
	185 Å°C	365 Å°F	Rate B/120; ISO 306
	240 Å°C	464 Å°F	Rate A/50; ISO 306
Flammability, UL94	HB	HB	UL 94 by SABIC-IP
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Oxygen Index	21 %	21 %	ISO 4589

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.20e+13 ohm-cm	2.20e+13 ohm-cm	IEC 60093
Dielectric Constant	2.7	2.7	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.5	3.5	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	20.0 kV/mm	508 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.024	0.024	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.072	0.072	

Electrical Properties	Metric @ Frequency 50.0 - 60.0	English @ Frequency 50.0 - 60.0	Comments
	Hz	Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

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

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