

SABIC Innovative Plastics NORYL GTX GTX914 PPE+PA

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

Material Notes:

NORYL GTX914 is an unfilled GTX grade with an ideal combination of impact performance, dimensional stability at elevated temperatures, chemical resistance and processability.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GTX-GTX914-PPEPA.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	ASTM D792
Density	1.09 g/cc	0.0394 lb/in ³	ISO 1183
Moisture Absorption	1.20 %	1.20 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	3.5 %	3.5 %	ISO 62
Linear Mold Shrinkage, Flow	0.015 - 0.019 cm/cm	0.015 - 0.019 in/in	on Tensile Bar; SABIC Method
	0.013 - 0.016 cm/cm	0.013 - 0.016 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Linear Mold Shrinkage, Transverse	0.011 - 0.014 cm/cm	0.011 - 0.014 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	12 g/10 min	12 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 280 Â°C	@Load 11.0 lb, Temperature 536 Â°F	
Melt Index of Compound	11 g/10 min	11 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 280 Â°C	@Load 11.0 lb, Temperature 536 Â°F	

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	90.0 MPa	13100 psi	ISO 2039-1
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	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	60 %	60 %	50 mm/min; ISO 527
	100 %	100 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Elongation at Yield	15 %	15 %	50 mm/min; ISO 527
	15 %	15 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	1.95 GPa	283 ksi	50 mm/min; ASTM D638
	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 D790
	80.0 MPa	11600 psi	2 mm/min; ISO 178
Flexural Modulus	1.90 GPa	276 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.00 GPa	290 ksi	2 mm/min; ISO 178
Izod Impact, Notched	2.80 J/cm	5.25 ft-lb/in	ASTM D256
	1.20 J/cm	2.25 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	30.0 kJ/mÂ²	14.3 ft-lb/inÂ²	80*10*4; ISO 180/1A
	15.0 kJ/mÂ²	7.14 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	3.00 J/cmÂ²	14.3 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	3.00 J/cmÂ²	14.3 ft-lb/inÂ²	ISO 179/2C
	1.50 J/cmÂ²	7.14 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	60.0 J	44.3 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Taber Abrasion, mg/1000 Cycles	15	15	CS-17, 1 kg; SABIC Method

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	

Thermal Properties	Metric @Temperature 23.0 - 60.0 Â°C	English @Temperature 73.4 - 140 Â°F	ISO 11359-2 Comments
CTE, linear, Transverse to Flow	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	
	95.0 Âµm/m-Â°C	52.8 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
Thermal Conductivity	0.230 W/m-K	1.60 BTU-in/hr-ftÂ²-Â°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	180 Â°C	356 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	180 Â°C	356 Â°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	190 Â°C	374 Â°F	Rate B/50; ISO 306
	195 Â°C	383 Â°F	Rate B/120; ISO 306
	195 Â°C	383 Â°F	Rate B/50; ASTM D1525
	245 Â°C	473 Â°F	Rate A/50; ISO 306
Flammability, UL94	HB	HB	UL 94 by SABIC-IP
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
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	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	

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

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