


SABIC Noryl GTX GTX4110 PPE+PA66 (Unverified Data)**






Categories: [Polymer](#); [Thermoplastic](#); [Polyester, TP](#); [Polyphenylene Ether/PPO](#)


Material Notes: Non-brominated, non-chlorinated Flame Retardant PPE/PA66 alloy, 10% glass reinforced. Combines ductility, modulus and high CTI with dimensional stability.

This data was supplied by SABIC-IP for the Americas region.

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.80 %	0.80 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	4.0 %	4.0 %	ISO 62
Linear Mold Shrinkage, Flow	@Temperature 23.0 °C 0.0050 - 0.0070 cm/cm 0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	@Temperature 73.4 °F 0.0050 - 0.0070 in/in 0.0050 - 0.0070 in/in @Thickness 0.126 in	on tensile bar; SABIC Method SABIC Method
Linear Mold Shrinkage, Transverse	0.0070 - 0.0090 cm/cm @Thickness 3.20 mm	0.0070 - 0.0090 in/in @Thickness 0.126 in	SABIC Method
Melt Flow 	9.0 g/10 min @Load 2.16 kg, Temperature 280 °C 20 g/10 min @Load 3.80 kg, Temperature 280 °C 39 g/10 min @Load 5.00 kg, Temperature 280 °C	9.0 g/10 min @Load 4.76 lb, Temperature 536 °F 20 g/10 min @Load 8.38 lb, Temperature 536 °F 39 g/10 min @Load 11.0 lb, Temperature 536 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133 ASTM D 1238 ASTM D 1238





Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	83.0 MPa 85.0 MPa	12000 psi 12300 psi	Type I, 5 mm/min; ASTM D 638 5 mm/min; ISO 527
Tensile Strength, Yield	90.0 MPa 90.0 MPa	13100 psi 13100 psi	Type I, 5 mm/min; ASTM D 638 5 mm/min; ISO 527
Elongation at Break	6.0 % 8.0 %	6.0 % 8.0 %	5 mm/min; ISO 527 Type I, 5 mm/min; ASTM D 638
Elongation at Yield	3.0 % 5.0 %	3.0 % 5.0 %	5 mm/min; ISO 527 Type I, 5 mm/min; ASTM D 638
Tensile Modulus	4.30 GPa 4.30 GPa	624 ksi 624 ksi	5 mm/min; ASTM D 638 1 mm/min; ISO 527
Flexural Strength	144 MPa	20900 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Yield Strength	145 MPa 145 MPa	21000 psi 21000 psi	2 mm/min; ISO 178 1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	4.00 GPa 4.00 GPa	580 ksi 580 ksi	2 mm/min; ISO 178 1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.530 J/cm @Temperature 23.0 °C	0.993 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Unnotched	5.87 J/cm @Temperature 23.0 °C	11.0 ft-lb/in @Temperature 73.4 °F	ASTM D 4812
Izod Impact, Notched (ISO) 	3.00 kJ/m ² @Temperature -30.0 °C	1.43 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Izod Impact, Notched (ISO) 	13.0 kJ/m ² @Temperature 23.0 °C	6.19 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO) 	30.0 kJ/m ² @Temperature -30.0 °C	14.3 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1U
Izod Impact, Unnotched (ISO) 	40.0 kJ/m ² @Temperature 23.0 °C	19.0 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched 	3.50 J/cm ² @Temperature -30.0 °C	16.7 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU

Charpy Impact, Notched 	5.00 J/cm ² @Temperature 23.0 °C	23.8 ft-lb/in ² @Temperature 73.4 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	0.200 J/cm ² @Temperature -30.0 °C	0.952 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.400 J/cm ² @Temperature 23.0 °C	1.90 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Instrumented Impact Total Energy	3.00 J @Temperature 23.0 °C	2.21 ft-lb @Temperature 73.4 °F	ASTM D 3763

Electrical Properties

	Metric	English	Comments
Volume Resistivity	1.20e+16 ohm-cm	1.20e+16 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	3.0	3.0	IEC 60250
Dielectric Strength	@Frequency 1.00e+6 Hz 16.0 kV/mm @Thickness 3.20 mm	@Frequency 1.00e+6 Hz 406 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
Dissipation Factor	0.018 @Frequency 1.00e+6 Hz	0.018 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	250 - 400 V 375 V	250 - 400 V 375 V	PLC code 2; UL 746A IEC 60112
Hot Wire Ignition, HWI	60 - 120 sec	60 - 120 sec	PLC code 1; UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	surface, PLC code 0; UL 746A

Thermal Properties

	Metric	English	Comments
CTE, linear, Parallel to Flow 	54.0 µm/m-°C @Temperature -40.0 - 40.0 °C	30.0 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	55.0 µm/m-°C @Temperature 23.0 - 60.0 °C	30.6 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
CTE, linear, Transverse to Flow 	90.0 µm/m-°C @Temperature -40.0 - 40.0 °C	50.0 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	100 µm/m-°C @Temperature 23.0 - 60.0 °C	55.6 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	239 °C 235 °C @Thickness 3.20 mm	462 °F 455 °F @Thickness 0.126 in	Flatw 80*10*4 sp=64mm; ISO 75/Bf unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	193 °C @Thickness 3.20 mm	379 °F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	220 °C 230 °C 230 °C	428 °F 446 °F 446 °F	Rate B/50; ASTM D 1525 Rate B/50; ISO 306 Rate B/120; ISO 306
UL RTI, Electrical	120 °C	248 °F	UL 746B
UL RTI, Mechanical with Impact	90.0 °C	194 °F	UL 746B
UL RTI, Mechanical without Impact	95.0 °C	203 °F	UL 746B
Flammability, UL94 	V-1 @Thickness 1.00 mm V-1 @Thickness 2.48 mm V-0 @Thickness 2.99 mm V-0 @Thickness 3.00 mm	V-1 @Thickness 0.0394 in V-1 @Thickness 0.0976 in V-0 @Thickness 0.118 in V-0 @Thickness 0.118 in	UL 94 by SABIC-IP UL 94 UL 94 UL 94 by SABIC-IP UL 94 by SABIC-IP
	5VA @Thickness 2.50 mm 5VA @Thickness 2.48 mm	5VA @Thickness 0.0984 in 5VA @Thickness 0.0976 in	UL 94 by SABIC-IP UL 94
Oxygen Index	33 %	33 %	LOI; ISO 4589
Glow Wire Flammability Index 	850 °C @Thickness 1.60 mm 960 °C @Thickness 2.00 mm	1560 °F @Thickness 0.0630 in 1760 °F @Thickness 0.0787 in	IEC 60695-2-12 IEC 60695-2-12

Descriptive Properties

Ball Pressure Test, 125°C +/- 2°C	Pass	IEC 60695-10-2
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