

SABIC Innovative Plastics NORYL GTX GTX944 PPE+PA (Europe-Africa-Middle East)

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-Europe-Africa-Middle-East.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 | 0.014 - 0.017 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 | 12.5 g/10 min | 12.5 g/10 min | ASTM D1238 |
| | @Load 5.00 kg, Temperature 280 ^o C | @Load 11.0 lb, Temperature 536 ^o F | |
| Melt Index of Compound | 12 g/10 min | 12 g/10 min | MVR [cm ³ /10 min]; ISO 1133 |
| | @Load 5.00 kg, Temperature 280 ^o C | @Load 11.0 lb, Temperature 536 ^o F | |

| 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 |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|---------------------------|---------------------------|------------------------------------|
| Elongation at Yield | 3.0 % | 3.0 % | 50 mm/min; ISO 527 |
| | 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 | ASTM D256 |
| 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 | 80*10*4; ISO 180/1A |
| | 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 | 80*10*4; ISO 180/1A |
| 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 | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
| Dart Drop, Total Energy | 55.0 J | 40.6 ft-lb | ASTM D3763 |
| | @Temperature 23.0 Â°C | @Temperature 73.4 Â°F | ASTM D3763 |

| 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 | ASTM E 831 |
| | 90.0 Âµm/m-Â°C | 50.0 Âµin/in-Â°F | |

| Thermal Properties | Metric | English | ISO 11359-2 Comments |
|---|-------------------------------|------------------------------|------------------------------------|
| | @Temperature 23.0 - 60.0 Â°C | @Temperature 73.4 - 140 Â°F | |
| 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 | |
| | 100 Âµm/m-Â°C | 55.6 Âµin/in-Â°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F | |
| Thermal Conductivity | 0.240 W/m-K | 1.67 BTU-in/hr-ftÂ²-Â°F | ISO 8302 |
| Deflection Temperature at 0.46 MPa (66 psi) | 175 Â°C | 347 Â°F | Edgew 120*10*4 sp=100mm; ISO 75/Be |
| | 185 Â°C | 365 Â°F | unannealed; ASTM D648 |
| | @Thickness 3.20 mm | @Thickness 0.126 in | |
| Vicat Softening Point | 180 Â°C | 356 Â°F | Rate B/50; ASTM D1525 |
| | 180 Â°C | 356 Â°F | Rate B/50; ISO 306 |
| | 185 Â°C | 365 Â°F | Rate B/120; ISO 306 |
| | 240 Â°C | 464 Â°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 | |

| Electrical Properties | Metric | English | Comments |
|----------------------------|---------------------------|---------------------------|-----------|
| | @Frequency 50.0 - 60.0 Hz | @Frequency 50.0 - 60.0 Hz | IEC 60250 |
| Comparative Tracking Index | 600 V | 600 V | IEC 60112 |

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

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