

NORYL GTX™ RESIN GTX910C

REGION ASIA

DESCRIPTION

NORYL GTX910C resin is a non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). NORYL GTX910C resin exhibits excellent chemical resistance and is targeted for automotive applications such as exterior automotive applications such as wheel covers and wheel trim.

| GENERAL INFORMATION | |
|-----------------------|---|
| Features | Chemical Resistance, Hydrolytic Stability, Low Warpage, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Creep resistant, Dimensional stability, High stiffness/Strength, High temperature resistance, Impact resistant, No PFAS intentionally added |
| Fillers | Unreinforced |
| Polymer Types | Polyphenylene Ether + PA (PPE+Nylon) |
| Processing Techniques | Injection Molding |
| INDUSTRY | SUB INDUSTRY |
| Automotive | Automotive Exteriors |

TYPICAL PROPERTY VALUES

Revision 20240531

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|-------------------|--------------|
| MECHANICAL ⁽¹⁾ | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 48 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 50 mm/min | 46 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 50 mm/min | 22 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 50 mm/min | 63 | % | ASTM D638 |
| Tensile Modulus, 50 mm/min | 1992 | MPa | ASTM D638 |
| Flexural Strength, 1.3 mm/min, 50 mm span | 67 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 1530 | MPa | ASTM D790 |
| Tensile Stress, yield, 50 mm/min | 50 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 47 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 9 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 69 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 1955 | MPa | ISO 527 |
| Flexural Strength, 2 mm/min | 63 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 1538 | MPa | ISO 178 |
| IMPACT ⁽¹⁾ | | | |
| Izod Impact, notched, 23°C | 621 | J/m | ASTM D256 |
| Izod Impact, notched, -30°C | 166 | J/m | ASTM D256 |
| Izod Impact, notched 80*10*4 +23°C | 50 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 16 | kJ/m ² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 30 | kJ/m ² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm | 14 | kJ/m ² | ISO 179/1eA |
| Instrumented Dart Impact Total Energy, 23°C | 50 | J | ASTM D3763 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------------|--------------|
| Instrumented Dart Impact Total Energy, -30°C | 45 | J | ASTM D3763 |
| THERMAL ⁽¹⁾ | | | |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 158 | °C | ASTM D648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 86 | °C | ASTM D648 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 159 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 75 | °C | ISO 75/Af |
| CTE, -40°C to 40°C, flow | 8.6E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 8.6E-05 | 1/°C | ASTM E831 |
| Vicat Softening Temp, Rate B/50 | 172 | °C | ASTM D1525 |
| Vicat Softening Temp, Rate B/120 | 172 | °C | ASTM D1525 |
| Vicat Softening Temp, Rate A/50 | 208 | °C | ISO 306 |
| Vicat Softening Temp, Rate A/120 | 206 | °C | ISO 306 |
| PHYSICAL ⁽¹⁾ | | | |
| Specific Gravity | 1.09 | - | ASTM D792 |
| Melt Flow Rate, 280°C/2.16 kgf | 15 | g/10 min | ASTM D1238 |
| Melt Flow Rate, 280°C/5.0 kgf | 50 | g/10 min | ASTM D1238 |
| Melt Volume Rate, MVR at 280°C/2.16 kg | 19 | cm ³ /10 min | ISO 1133 |
| Water Absorption, 23°C/24hrs | 0.81 | % | SABIC method |
| Mold Shrinkage, flow ⁽²⁾ | 0.98 – 1.01 | % | SABIC method |
| Mold Shrinkage, xflow ⁽²⁾ | 1.01 – 1.04 | % | SABIC method |
| INJECTION MOLDING ⁽³⁾ | | | |
| Drying Temperature | 120 | °C | |
| Drying Time | 3 – 4 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 280 – 305 | °C | |
| Nozzle Temperature | 280 – 305 | °C | |
| Front - Zone 3 Temperature | 280 – 305 | °C | |
| Middle - Zone 2 Temperature | 270 – 300 | °C | |
| Rear - Zone 1 Temperature | 260 – 290 | °C | |
| Mold Temperature | 20 – 80 | °C | |
| Back Pressure | 0.4 – 0.6 | MPa | |
| Screw Speed | 20 – 100 | rpm | |
| Shot to Cylinder Size | 30 – 50 | % | |
| Vent Depth | 0.013 – 0.038 | mm | |

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.



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