# NORYL GTX™ RESIN GTX830

REGION ASIA

## DESCRIPTION

NORYL GTX™ 830 resin is a 30% glass reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade has high stiffness (flexural modulus 8200 MPa), excellent chemical resistance, and high heat resistance. NORYL GTX GTX830 resin is an excellent candidate for a wide variety of applications including automotive under the bonnet applications and water meter housings.

## TYPICAL PROPERTY VALUES

Revision 20191004

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 5 mm/min | 151 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 5 mm/min | 158 | MPa | ASTM D 638 |
| Tensile Strain, brk, Type I, 5 mm/min | 7 | % | ASTM D 638 |
| Flexural Stress, yld, 2.6 mm/min, 100 mm span | 248 | MPa | ASTM D 790 |
| Flexural Modulus, 2.6 mm/min, 100 mm span | 8580 | MPa | ASTM D 790 |
| Hardness, Rockwell R | 120 | - | ASTM D 785 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 106 | J/m | ASTM D 256 |
| Izod Impact, notched, -30°C | 80 | J/m | ASTM D 256 |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 248 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 6.4 mm, unannealed | 254 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 240 | °C | ASTM D 648 |
| CTE, -20°C to 150°C, flow | 0.0000198 – 0.0000306 | 1/°C | ASTM E 831 |
| PHYSICAL | | | |
| Specific Gravity | 1.33 | - | ASTM D 792 |
| Density | 1.328 | g/cm³ | ASTM D 792 |
| Water Absorption, 50% RH, equilib | 1 | % | ASTM D 570 |
| Moisture Absorption, 50% RH, 24 hrs | 0.5 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm | 0.2 – 0.3 | % | SABIC method |
| Mold Shrinkage, xflow, 3.2 mm | 0.65 – 0.85 | % | SABIC method |
| INJECTION MOLDING | | | |
| Drying Temperature | 95 – 105 | °C | |
| Drying Time | 3 – 4 | hrs | |
| Drying Time (Cumulative) | 8 | hrs | |
| Maximum Moisture Content | 0.07 | % | |
| Minimum Moisture Content | 0.02 | % | |
| Melt Temperature | 280 – 305 | °C | |
| Nozzle Temperature | 280 – 305 | °C | |
| Front - Zone 3 Temperature | 275 – 305 | °C | |
| Middle - Zone 2 Temperature | 270 – 305 | °C | |
| Rear - Zone 1 Temperature | 265 – 305 | °C | |
| Mold Temperature | 75 – 120 | °C | |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **Back Pressure** | 0.3 – 1.4 | MPa | |
| **Screw Speed** | 20 – 100 | rpm | |
| **Shot to Cylinder Size** | 30 – 50 | % | |
| **Vent Depth** | 0.013 – 0.038 | mm | |

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