# NORYL GTX™ Resin GTX820 - Europe

(PPE+PA*)-GF20 — Saudi Basic Industries Corporation (SABIC)

## Product Texts

NORYL GTX™ 820 resin is a 20% glass reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade has high stiffness (flexural modulus 4000 MPa), excellent chemical resistance, and high heat resistance. NORYL GTX GTX830 resin is an excellent candidate for a wide variety of applications including valves for water management.

UL Yellow Card Link E45329-236570

| Processing/Physical Characteristics | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Melt volume-flow rate, MVR | **6** | cm³/10min | ISO 1133 |
| Temperature | **280** | °C | - |
| Load | **5** | kg | - |

| Mechanical properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Tensile Modulus | **5700** | MPa | ISO 527 |
| Yield stress | **100** | MPa | ISO 527 |
| Yield strain | **2.5** | % | ISO 527 |
| Stress at break | **95** | MPa | ISO 527 |
| Strain at break | **3.5** | % | ISO 527 |
| Flexural modulus | **5200** | MPa | ISO 178 |
| Charpy impact strength, +23°C | **50** | kJ/m² | ISO 179/1eU |
| Charpy impact strength, -30°C | **40** | kJ/m² | ISO 179/1eU |
| Izod impact strength, +23°C, 4mm | **40** | kJ/m² | ISO 180/1U |
| Izod impact strength, -30°C, 4mm | **40** | kJ/m² | ISO 180/1U |
| Ball indentation hardness | **100** | MPa | ISO 2039-1 |

| Thermal properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Vicat softening temperature, B | **215** | °C | ISO 306 |
| Vicat softening temperature, 120°C/h 50N | **220** | °C | ISO 306 |
| Coeff. of linear therm. expansion, parallel | **30** | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion, normal | **70** | E-6/K | ISO 11359-1/-2 |
| Burning behav. at 1.5 mm nom. thickn. | **HB** | class | IEC 60695-11-10 |
| Thickness tested | **1.5** | mm | - |
| Thermal Conductivity | **0.25** | W/(m K) | DIN 52616 |

| Other properties | Value | Unit | Test Standard |
|---|---|---|---|
| Water absorption | **3.2** | % | Sim. to ISO 62 |
| Humidity absorption | **1.08** | % | Sim. to ISO 62 |
| Density | **1250** | kg/m³ | ISO 1183 |

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|---|---|---|
| Pre-drying - Temperature | **100 - 110** | °C | - |
| Pre-drying - Time | **2 - 3** | h | - |
| Processing humidity | **≤0.07** | % | - |
| Melt temperature | **280 - 300** | °C | - |
| Mold temperature | **80 - 100** | °C | - |
| Feed temperature | **60 - 80** | °C | - |
| Zone 1 | **260 - 280** | °C | - |
| Zone 2 | **270 - 290** | °C | - |
| Zone 3 | **280 - 300** | °C | - |

## Characteristics

**Processing**

Injection Molding

**Regional Availability**

Europe

**Applications**
Automotive