

## Qr Resin QR-2000-GF10

Acrylonitrile Butadiene Styrene  
LyondellBasell Industries  
Engineering Plastics

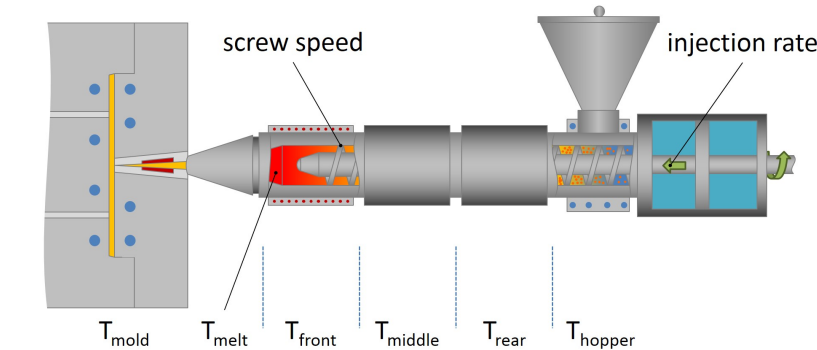
| General                |                                     |                    |                 |
|------------------------|-------------------------------------|--------------------|-----------------|
| Filler / Reinforcement | • Glass Fiber, 10% Filler by Weight |                    |                 |
| Features               | • High Heat Resistance              |                    |                 |
| Appearance             | • Black                             | • Colors Available | • Natural Color |
| Forms                  | • Pellets                           |                    |                 |
| Processing Method      | • Injection Molding                 |                    |                 |

| Physical                          | Nominal Value (English) | Nominal Value (SI)     | Test Method |
|-----------------------------------|-------------------------|------------------------|-------------|
| Density / Specific Gravity        | 1.10                    | 1.10 g/cm <sup>3</sup> | ASTM D792   |
| Mechanical                        | Nominal Value (English) | Nominal Value (SI)     | Test Method |
| Tensile Strength (Yield)          | 7000 psi                | 48.3 MPa               | ASTM D638   |
| Tensile Elongation (Break)        | 3.0 %                   | 3.0 %                  | ASTM D638   |
| Flexural Modulus                  | 450000 psi              | 3100 MPa               | ASTM D790   |
| Flexural Strength (Break)         | 10000 psi               | 68.9 MPa               | ASTM D790   |
| Impact                            | Nominal Value (English) | Nominal Value (SI)     | Test Method |
| Notched Izod Impact (73°F (23°C)) | 1.0 ft·lb/in            | 53 J/m                 | ASTM D256   |
| Thermal                           | Nominal Value (English) | Nominal Value (SI)     | Test Method |
| Deflection Temperature Under Load |                         |                        | ASTM D648   |
| 66 Psi (0.45 Mpa), Unannealed     | 220 °F                  | 104 °C                 |             |
| 264 Psi (1.8 Mpa), Unannealed     | 210 °F                  | 98.9 °C                |             |



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| Injection              | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 200 °F                  | 93 °C              |
| Drying Time            | 2.0 to 4.0 hr           | 2.0 to 4.0 hr      |
| Drying Time, Maximum   | 4.0 hr                  | 4.0 hr             |
| Rear Temperature       | 370 to 410 °F           | 188 to 210 °C      |
| Middle Temperature     | 400 to 440 °F           | 204 to 227 °C      |
| Front Temperature      | 420 to 460 °F           | 216 to 238 °C      |
| Nozzle Temperature     | 420 to 500 °F           | 216 to 260 °C      |
| Processing (Melt) Temp | 420 to 500 °F           | 216 to 260 °C      |
| Mold Temperature       | 120 to 160 °F           | 49 to 71 °C        |

Notes

These are typical property values not to be construed as specification limits.

