

Technical Data Sheet

QR Resin QR-4000-GF10

Polyphenylene Ether + PS + PA
Engineering Plastics

| General | | | |
|---------------------------|---|--------------------|------------------------|
| Filler / Reinforcement | • Glass Fiber, 10% Filler by Weight | | |
| Features | • Chemical Resistant | • Good Stiffness | • High Heat Resistance |
| Automotive Specifications | • CHRYSLER MS-DB-414 CPN3321 Color: DCX Black | | |
| Appearance | • Black | • Colors Available | |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---|-------------------------|------------------------|-------------|
| Density / Specific Gravity | 1.17 | 1.17 g/cm ³ | ASTM D792 |
| Molding Shrinkage - Flow (0.125 in (3.18 mm)) | 6.0E-3 in/in | 0.60 % | ASTM D955 |

| Mechanical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|----------------------------|-------------------------|--------------------|-------------|
| Tensile Strength (Yield) | 9600 psi | 66.2 MPa | ASTM D638 |
| Tensile Elongation (Break) | 10 % | 10 % | ASTM D638 |
| Flexural Modulus | 420000 psi | 2900 MPa | ASTM D790 |
| Flexural Strength (Yield) | 22000 psi | 152 MPa | ASTM D790 |

| Impact | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---------------------|-------------------------|--------------------|-------------|
| Notched Izod Impact | | | ASTM D256 |
| -20°F (-29°C) | 1.0 ft·lb/in | 53 J/m | |
| 73°F (23°C) | 1.3 ft·lb/in | 69 J/m | |

| Thermal | Nominal Value (English) | Nominal Value (SI) | Test Method |
|-----------------------------------|-------------------------|--------------------|-------------|
| Deflection Temperature Under Load | | | ASTM D648 |
| 66 psi (0.45 MPa), Unannealed | 450 °F | 232 °C | |
| 264 psi (1.8 MPa), Unannealed | 350 °F | 177 °C | |

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| Injection | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature | 225 °F | 107 °C |
| Drying Time | 4.0 to 8.0 hr | 4.0 to 8.0 hr |
| Drying Time, Maximum | 8.0 hr | 8.0 hr |
| Rear Temperature | 510 to 570 °F | 266 to 299 °C |
| Middle Temperature | 520 to 570 °F | 271 to 299 °C |
| Front Temperature | 530 to 570 °F | 277 to 299 °C |
| Nozzle Temperature | 540 to 570 °F | 282 to 299 °C |
| Processing (Melt) Temp | 540 to 570 °F | 282 to 299 °C |
| Mold Temperature | 170 to 240 °F | 77 to 116 °C |

Notes

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