

Radilon® NeXTreme RV350HHR 3800 BK

Radici Group High Performance Polymers - Polyamide

General Information

Product Description

High Temperature polyamide injection molding grade, 35% glass fiber reinforced. Superior thermal resistance in contact with hot air. Black colour.

Suitable for demanding mechanical applications in very severe temperature conditions, where the parts must endure long term contact with hot air until 220-230°C. Very good properties retention after ageing. Typical applications in automotive are under bonnet components, like turbo air ducts, intercooler end caps. This material can be processed with water conditioned tools.

General

| | |
|------------------------|---|
| Filler / Reinforcement | • Glass Fiber, 35% Filler by Weight |
| Features | • Good Heat Resistance • Heat Aging Resistant |
| Uses | • Automotive Applications • Automotive Under the Hood |
| Agency Ratings | • EU 2011/65/EC |
| RoHS Compliance | • RoHS Compliant |
| Appearance | • Black |
| Processing Method | • Injection Molding |
| Resin ID (ISO 1043) | • PA*-GF35 |

Properties¹

| Physical | Dry | Conditioned | Unit | Test Method |
|--|---------|-------------|-----------------------|----------------|
| Density | 1.41 | -- | g/cm ³ | ISO 1183 |
| Water Absorption Equilibrium, 73°F, 0.0787 in, 50% RH | 1.2 | -- | % | ISO 62 |
| Mechanical | Dry | Conditioned | Unit | Test Method |
| Tensile Modulus | 1.67E+6 | -- | psi | ISO 527-1/1A/1 |
| Tensile Stress (Break) | 27600 | -- | psi | ISO 527-2/1A/5 |
| Tensile Strain (Break) | 3.0 | -- | % | ISO 527-2/1A/5 |
| Flexural Modulus ² | 1.46E+6 | -- | psi | ISO 178 |
| Flexural Stress ² | 40600 | -- | psi | ISO 178 |
| Impact | Dry | Conditioned | Unit | Test Method |
| Charpy Notched Impact Strength | | | | ISO 179/1eA |
| -22°F | 5.9 | -- | ft·lb/in ² | |
| 73°F | 7.1 | -- | ft·lb/in ² | |
| Charpy Unnotched Impact Strength | | | | ISO 179/1eU |
| -22°F | 33 | -- | ft·lb/in ² | |
| 73°F | 45 | -- | ft·lb/in ² | |
| Thermal | Dry | Conditioned | Unit | Test Method |
| Deflection Temperature Under Load 66 psi, Unannealed | 486 | -- | °F | ISO 75-2/Bf |
| Melting Temperature ³ | 563 | -- | °F | ISO 11357-3 |
| Electrical | Dry | Conditioned | Unit | Test Method |
| Surface Resistivity (500 V) | 1.0E+12 | 1.0E+10 | ohms | IEC 62631-3-2 |
| Volume Resistivity (500 V) | 1.0E+13 | 1.0E+11 | ohms·m | IEC 62631-3-1 |

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| Flammability | Dry | Conditioned | Unit | Test Method |
|-------------------------|-----|-------------|--------|-------------|
| Burning Rate (0.118 in) | 0.0 | -- | in/min | ISO 3795 |
| Flame Rating (0.031 in) | HB | -- | | UL 94 |

Processing Information

| Injection | Dry | Unit |
|--------------------------------------|---------------|------|
| Drying Temperature - Desiccant Dryer | 176 | °F |
| Drying Time - Desiccant Dryer | 2.0 to 4.0 | hr |
| Dew Point - Desiccant Dryer | < -4 | °F |
| Suggested Max Moisture | 0.15 | % |
| Processing (Melt) Temp | 581 to 599 | °F |
| Mold Temperature | 194 to 212 | °F |
| Injection Rate | Moderate-Fast | |

Notes

¹ Typical properties: these are not to be construed as specifications.

² 0.079 in/min

³ 10°C/min