

Radilon® S RV300W 100 NT

 Radici Group High Performance Polymers - *Polyamide 6*
General Information
Product Description

PA6 30% glass fiber reinforced injection moulding grade. Heat stabilized. Natural colour.

Suitable for parts requiring high stiffness, good mechanical resistance and excellent heat ageing properties retention.

General

| | |
|---------------------------|---|
| Material Status | • Commercial: Active |
| Availability | • Africa & Middle East • Europe • North America • Asia Pacific • Latin America |
| Filler / Reinforcement | • Glass Fiber, 30% Filler by Weight |
| Additive | • Heat Stabilizer |
| Features | • Heat Aging Resistant • Heat Stabilized • High Stiffness |
| Uses | • Automotive Applications |
| Agency Ratings | • EU 2011/65/EC |
| RoHS Compliance | • RoHS Compliant |
| Automotive Specifications | • GM GMW3029P-PA6-GF30H |
| Appearance | • Natural Color |
| Processing Method | • Injection Molding |
| Resin ID (ISO 1043) | • PA6-T GF30 |

Properties ¹

| Physical | Dry | Conditioned | Unit | Test Method |
|---|---------|-------------|-----------------------|----------------|
| Density | 1.35 | -- | g/cm ³ | ISO 1183 |
| Molding Shrinkage ² | | | | ISO 294-4 |
| Across Flow | 0.80 | -- | % | |
| Flow | 0.30 | -- | % | |
| Water Absorption (Saturation, 73°F, 0.0787 in) | 7.5 | -- | % | ISO 62 |
| Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH) | 2.0 | -- | % | ISO 62 |
| Mechanical | Dry | Conditioned | Unit | Test Method |
| Tensile Modulus | 1.38E+6 | 928000 | psi | ISO 527-1/1A/1 |
| Tensile Stress (Break) | 25400 | 16700 | psi | ISO 527-2/1A/5 |
| Tensile Strain (Break) | 4.1 | 8.0 | % | ISO 527-2/1A/5 |
| Flexural Modulus ³ | 1.17E+6 | -- | psi | ISO 178 |
| Flexural Stress ³ | 37700 | -- | psi | ISO 178 |
| Impact | Dry | Conditioned | Unit | Test Method |
| Charpy Notched Impact Strength | | | | ISO 179/1eA |
| -22°F | 5.2 | -- | ft·lb/in ² | |
| 73°F | 7.1 | 12 | ft·lb/in ² | |
| Charpy Unnotched Impact Strength | | | | ISO 179/1eU |
| -22°F | 40 | -- | ft·lb/in ² | |
| 73°F | 45 | 52 | ft·lb/in ² | |
| Thermal | Dry | Conditioned | Unit | Test Method |
| Deflection Temperature Under Load (66 psi, Unannealed) | 419 | -- | °F | ISO 75-2/Bf |
| Deflection Temperature Under Load (264 psi, Unannealed) | 392 | -- | °F | ISO 75-2/Af |
| Vicat Softening Temperature | 410 | -- | °F | ISO 306/B50 |
| Melting Temperature ⁴ | 428 | -- | °F | ISO 11357-3 |
| CLTE - Flow (73 to 131°F) | 1.4E-5 | -- | in/in/°F | ISO 11359-2 |
| CLTE - Transverse (73 to 131°F) | 5.3E-5 | -- | in/in/°F | ISO 11359-2 |



| Electrical | Dry | Conditioned | Unit | Test Method |
|--|------------|--------------------|-------------|--------------------|
| Surface Resistivity ⁵ | 1.0E+12 | 1.0E+10 | ohms | IEC 62631-3-2 |
| Volume Resistivity ⁵ | 1.0E+15 | 1.0E+13 | ohms·cm | IEC 62631-3-1 |
| 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 |
| Glow Wire Flammability Index (0.08 in) | 1200 | -- | °F | IEC 60695-2-12 |

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 | 464 to 536 °F |
| Mold Temperature | 176 to 194 °F |
| Injection Rate | Moderate-Fast |

Notes

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

² 280°C Melt Temperature/ 90°C Mold Temperature/ 60 MPa Cavity Pressure

³ 0.079 in/min

⁴ 10°C/min

⁵ 500V

