

Ryton® XK2340

polyphenylene sulfide alloy

Ryton® XK2340 40% glass fiber reinforced polyphenylene sulfide alloy compound provides excellent mechanical strength, toughness, and rigidity, along with excellent flow in thin-walled

parts, low flash characteristics, and fast cycle times. It may be easily molded in conventional injection molding equipment utilizing water heated molds.

General

| | | |
|------------------------|--|-------------------------------------|
| Material Status | • Commercial: Active | |
| Availability | • Asia Pacific • Europe | • Latin America • North America |
| Filler / Reinforcement | • Glass Fiber, 40% Filler by Weight | |
| Features | • Fast Molding Cycle • Good Flow • Good Strength | • Good Toughness • High Rigidity |
| Uses | • Automotive Applications | |
| RoHS Compliance | • RoHS Compliant | |
| Appearance | • Black | |
| Forms | • Pellets | |
| Processing Method | • Injection Molding | |

Physical

| | Typical Value | Unit | Test method |
|--------------------------------|---------------|------|-------------|
| Density / Specific Gravity | 1.56 | | ASTM D792 |
| Molding Shrinkage | | | |
| Flow : 3.20 mm | 0.30 | % | |
| Across Flow : 3.20 mm | 0.60 | % | |
| Water Absorption (24 hr, 23°C) | 0.30 | % | ASTM D570 |

Mechanical

| | Typical Value | Unit | Test method |
|----------------------------|---------------|------|------------------------|
| Tensile Strength | | | |
| -- | 193 | MPa | ASTM D638 |
| -- | 195 | MPa | ISO 527-2 |
| Tensile Elongation (Break) | 1.8 | % | ASTM D638 ISO 527-2 |
| Flexural Modulus | | | |
| -- | 12400 | MPa | ASTM D790 |
| -- | 12000 | MPa | ISO 178 |
| Flexural Strength | | | |
| -- | 255 | MPa | ASTM D790 |
| -- | 270 | MPa | ISO 178 |
| Compressive Strength | 255 | MPa | ASTM D695 |
| Poisson's Ratio | 0.42 | | ISO 527 |

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| Impact | Typical Value | Unit | Test method |
|--|---------------|-------------------|-------------|
| Notched Izod Impact | | | |
| 3.18 mm | 85 | J/m | ASTM D256 |
| -- | 8.5 | kJ/m ² | ISO 180/A |
| Unnotched Izod Impact | | | |
| 3.18 mm | 640 | J/m | ASTM D4812 |
| -- | 35 | kJ/m ² | ISO 180 |
| Hardness | Typical Value | Unit | Test method |
| Rockwell Hardness | | | ASTM D785 |
| M-Scale | 95 | | |
| R-Scale | 115 | | |
| Thermal | Typical Value | Unit | Test method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 1.8 MPa, Unannealed | 245 | °C | |
| CLTE | | | ASTM E831 |
| Flow : -50 to 50°C | 2.0E-5 | cm/cm/°C | |
| Flow : 100 to 200°C | 1.5E-5 | cm/cm/°C | |
| Transverse : -50 to 50°C | 5.5E-5 | cm/cm/°C | |
| Transverse : 100 to 200°C | 1.0E-4 | cm/cm/°C | |
| Thermal Conductivity | 0.34 | W/m/K | |
| Electrical | Typical Value | Unit | Test method |
| Surface Resistivity | 1.0E+15 | ohms | ASTM D257 |
| Volume Resistivity | 1.0E+14 | ohms·cm | ASTM D257 |
| Dielectric Strength | 22 | kV/mm | ASTM D149 |
| Dielectric Constant | | | ASTM D150 |
| 25°C, 1 kHz | 4.30 | | |
| 25°C, 1 MHz | 3.90 | | |
| Dissipation Factor | | | ASTM D150 |
| 25°C, 1 kHz | 0.020 | | |
| 25°C, 1 MHz | 0.010 | | |
| Arc Resistance | 100 | sec | ASTM D495 |
| Comparative Tracking Index (CTI) | 275 | V | UL 746A |
| Insulation Resistance ¹ (90°C) | 1.0E+12 | ohms | |
| Flammability | Typical Value | Unit | Test method |
| Flame Rating (1.6 mm, Tested by CP Chemical) | HB | | UL 94 |
| Oxygen Index | 35 | % | ASTM D2863 |

Notes

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

¹ 95%RH, 48 hr

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