

# Ryton® XE5430BL

## polyphenylene sulfide alloy

Ryton® XE5430BL 30% glass fiber reinforced polyphenylene sulfide alloy compound provides

high ductility and impact resistance along with good thermal stability.

### General

|                        |                                   |                                     |
|------------------------|-----------------------------------|-------------------------------------|
| Material Status        | • Commercial: Active              |                                     |
| Availability           | • Asia Pacific<br>• Europe        | • Latin America<br>• North America  |
| Filler / Reinforcement | • Glass Fiber                     |                                     |
| Features               | • Chemical Resistant<br>• Ductile | • Good Toughness<br>• High Strength |
| RoHS Compliance        | • RoHS Compliant                  |                                     |
| Appearance             | • Black                           |                                     |
| Forms                  | • Pellets                         |                                     |

### Physical

|                                | Typical Value | Unit              | Test method |
|--------------------------------|---------------|-------------------|-------------|
| Density <sup>1</sup>           | 1.52          | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption (24 hr, 23°C) | 0.020         | %                 | ASTM D570   |
| Mold Shrinkage <sup>2</sup>    |               |                   |             |
| Flow                           | 0.20          | %                 |             |
| Transverse                     | 0.60          | %                 |             |

### Mechanical

|                            | Typical Value | Unit | Test method |
|----------------------------|---------------|------|-------------|
| Tensile Modulus            | 10800         | MPa  | ISO 527     |
| Tensile Strength           | 163           | MPa  | ISO 527     |
| Tensile Elongation (Break) | 2.1           | %    | ISO 527     |
| Flexural Modulus           | 9600          | MPa  | ISO 178     |
| Flexural Strength          | 235           | MPa  | ISO 178     |
| Compressive Strength       | 215           | MPa  | ISO 604     |
| Poisson's Ratio            | 0.38          |      | ISO 527     |

### Impact

|                                  | Typical Value | Unit              | Test method |
|----------------------------------|---------------|-------------------|-------------|
| Charpy Notched Impact Strength   | 9.4           | kJ/m <sup>2</sup> | ISO 179/1A  |
| Charpy Unnotched Impact Strength | 60            | kJ/m <sup>2</sup> | ISO 179/1U  |
| Notched Izod Impact Strength     | 11            | kJ/m <sup>2</sup> | ISO 180/1A  |
| Unnotched Izod Impact Strength   | 55            | kJ/m <sup>2</sup> | ISO 180/1U  |

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| Thermal                               | Typical Value Unit | Test method |
|---------------------------------------|--------------------|-------------|
| CLTE                                  |                    | ISO 11359-2 |
| Flow : -50 to 50°C                    | 2.0E-5 cm/cm/°C    |             |
| Flow : 100 to 200°C                   | 1.0E-5 cm/cm/°C    |             |
| Transverse : -50 to 50°C              | 5.5E-5 cm/cm/°C    |             |
| Transverse : 100 to 200°C             | 9.0E-5 cm/cm/°C    |             |
| Thermal Conductivity                  | 0.27 W/m/K         | ASTM E1530  |
| Heat Deflection Temperature - 1.8 MPa | 255 °C             | ASTM D648   |

| Electrical                 | Typical Value Unit | Test method |
|----------------------------|--------------------|-------------|
| Volume Resistivity         | 1.0E+16 ohms·cm    | ASTM D257   |
| Dielectric Strength        | 20 kV/mm           | ASTM D149   |
| Dielectric Constant        |                    | ASTM D150   |
| 25°C, 1 kHz                | 3.70               |             |
| 25°C, 1 MHz                | 3.70               |             |
| Dissipation Factor         |                    | ASTM D150   |
| 25°C, 1 kHz                | 2.0E-3             |             |
| 25°C, 1 MHz                | 2.0E-3             |             |
| Arc Resistance             | 125 sec            | ASTM D495   |
| Comparative Tracking Index | 150 V              | IEC 60112   |

| Flammability          | Typical Value Unit | Test method |
|-----------------------|--------------------|-------------|
| Flame Rating (1.5 mm) | V-0                | UL 94       |

| Injection              | Typical Value Unit |
|------------------------|--------------------|
| Drying Temperature     | 85 °C              |
| Drying Time            | 4.0 to 6.0 hr      |
| Rear Temperature       | 295 to 305 °C      |
| Middle Temperature     | 300 to 310 °C      |
| Front Temperature      | 305 to 315 °C      |
| Nozzle Temperature     | 305 to 315 °C      |
| Processing (Melt) Temp | 310 to 320 °C      |
| Mold Temperature       | 135 to 150 °C      |

## Notes

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

<sup>1</sup> Method A

<sup>2</sup> Measured on 102 mm x 102 mm x 3.2 mm plaques, edge gated.

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