

# Ryton® XE5500BL

## polyphenylene sulfide alloy

Ryton® XE5500BL unfilled polyphenylene sulfide alloy compound for extrusion provides excellent mechanical strength, ductility, toughness and chemical resistance.

### General

|                 |                                   |                                     |
|-----------------|-----------------------------------|-------------------------------------|
| Material Status | • Commercial: Active              |                                     |
| Availability    | • Asia Pacific<br>• Europe        | • Latin America<br>• North America  |
| 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   | 1.30          | g/cm <sup>3</sup> | ISO 1183    |
| Melt Mass-Flow Rate (MFR) <sup>1</sup> (316°C/5.0 kg) | 20            | g/10 min          | ASTM D1238  |
| Water Absorption (24 hr, 23°C)                        | 0.10          | %                 | ASTM D570   |
| Mold Shrinkage <sup>2</sup>                           | 1.30          | %                 |             |

| Mechanical                 | Typical Value | Unit | Test method |
|----------------------------|---------------|------|-------------|
| Tensile Modulus            | 2600          | MPa  | ISO 527     |
| Tensile Strength           | 55.0          | MPa  | ISO 527     |
| Tensile Elongation (Break) | 15            | %    | ISO 527     |
| Flexural Modulus           | 2500          | MPa  | ISO 178     |
| Flexural Strength          | 100           | MPa  | ISO 178     |

| Impact                       | Typical Value | Unit              | Test method |
|------------------------------|---------------|-------------------|-------------|
| Notched Izod Impact Strength | 30            | kJ/m <sup>2</sup> | ISO 180/A   |

| Thermal                                 | Typical Value | Unit   | Test method |
|---|---------------|--------|-------------|
| Thermal Conductivity                    | 0.20          | W/m/K  | ASTM E1530  |
| Coefficient of Linear Thermal Expansion |               |        | ISO 11359-2 |
|   | -50 to 50°C   | 7.5E-5 | cm/cm/°C    |
|   | 100 to 200°C  | 1.2E-4 | cm/cm/°C    |
| Heat Deflection Temperature             |               |        | ASTM D648   |
|   | 0.45 MPa      | 130    | °C          |
|   | 1.8 MPa       | 95     | °C          |

| Electrical          | Typical Value | Unit    | Test method |
|---------------------|---------------|---------|-------------|
| Volume Resistivity  | 1.0E+15       | ohms-cm | ASTM D257   |
| Dielectric Strength | 24            | kV/mm   | ASTM D149   |

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| Electrical                                    | Typical Value | Unit | Test method |
|---|---------------|------|-------------|
| Dielectric Constant                           |               |      | ASTM D150   |
| 25°C, 1 kHz                                   | 3.60          |      |             |
| 25°C, 1 MHz                                   | 3.50          |      |             |
| Dissipation Factor                            |               |      | ASTM D150   |
| 25°C, 1 kHz                                   | 3.0E-3        |      |             |
| 25°C, 1 MHz                                   | 9.0E-3        |      |             |
| Arc Resistance                                | 100           | sec  | ASTM D495   |
| Comparative Tracking Index (CTI) <sup>3</sup> | 125           | V    | UL 746      |
| Flammability                                  | Typical Value | Unit | Test method |
| Flame Rating <sup>3</sup> (1.6 mm)            | V-0           |      | UL 94       |

## Notes

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

<sup>1</sup> Procedure B

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

<sup>3</sup> This product is not currently UL listed; test results indicate this level of performance.



Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

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