

Xytron™ TC6022I

Envalior - Polyphenylene Sulfide

General Information

Product Description

Thermal conductive material

Design Challenge

Degradation & Stability | Chemical stability

General

| | |
|------------------------|--|
| Material Status | • Commercial: Active |
| Availability | • Africa & Middle East • Europe • Asia Pacific • Latin America • North America |
| Filler / Reinforcement | • Glass Fiber/Mineral, 60% Filler by Weight |
| Features | • Thermally Conductive |
| Processing Method | • Injection Molding |
| Resin ID | • PPS-(GF+MX)60 |

Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|--------------------------------|---------------|-------------------|-------------|
| Density | 1.85 | g/cm ³ | ISO 1183 |
| Molding Shrinkage | | | ISO 294-4 |
| Across Flow | 0.50 | % | |
| Flow | 0.20 | % | |
| Water Absorption (24 hr, 73°F) | 0.040 | % | ISO 62 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | | | ISO 527-1 |
| -- | 3.19E+6 | psi | |
| -40°F | 3.34E+6 | psi | |
| 248°F | 1.77E+6 | psi | |
| 320°F | 1.44E+6 | psi | |
| 356°F | 1.33E+6 | psi | |
| Tensile Stress | | | ISO 527-2 |
| Break | 17400 | psi | |
| Break, -40°F | 20000 | psi | |
| Break, 248°F | 11400 | psi | |
| Break, 320°F | 9140 | psi | |
| Break, 356°F | 7980 | psi | |
| Tensile Strain | | | ISO 527-2 |
| Break | 0.70 | % | |
| Break, -40°F | 0.75 | % | |
| Break, 248°F | 1.2 | % | |
| Break, 320°F | 1.5 | % | |
| Break, 356°F | 1.3 | % | |
| Flexural Modulus | | | ISO 178 |
| -- | 3.36E+6 | psi | |
| 248°F | 2.00E+6 | psi | |
| 320°F | 1.60E+6 | psi | |
| 356°F | 1.46E+6 | psi | |
| Flexural Stress | | | ISO 178 |
| -- | 31200 | psi | |
| 248°F | 20300 | psi | |



| | | |
|---|-----------------------------------|----------------------|
| 320°F | 16000 psi | |
| 356°F | 13800 psi | |
| Weldline Strain (0.16 in) | 0.10 % | ISO 527-2 |
| Weldline Strength (0.16 in) | 3336 psi | ISO 527-2 |
| Impact | Nominal Value Unit | Test Method |
| Charpy Notched Impact Strength | | ISO 179/1eA |
| -22°F | 4.3 ft·lb/in ² | |
| 73°F | 4.3 ft·lb/in ² | |
| Charpy Unnotched Impact Strength | | ISO 179/1eU |
| -22°F | 7.6 ft·lb/in ² | |
| 73°F | 7.6 ft·lb/in ² | |
| Hardness | Nominal Value Unit | Test Method |
| Rockwell Hardness | | ISO 2039-2 |
| M-Scale | 100 | |
| R-Scale | 120 | |
| Thermal | Nominal Value Unit | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 509 °F | ISO 75-2/A |
| Glass Transition Temperature ² | 194 °F | ISO 11357-2 |
| Melting Temperature ² | 536 °F | ISO 11357-3 |
| CLTE - Flow | | ISO 11359-2 |
| -- | 6.1E-6 in/in/°F | |
| -- ³ | 6.7E-6 in/in/°F | |
| CLTE - Transverse | | ISO 11359-2 |
| -- | 1.7E-5 in/in/°F | |
| -- ³ | 4.0E-5 in/in/°F | |
| Thermal Conductivity | | ASTM E1461 |
| -- ⁴ | 8.3 Btu·in/hr/ft ² /°F | |
| -- ⁵ | 15 Btu·in/hr/ft ² /°F | |
| RTI Elec | | UL 746B |
| 0.016 in | 266 °F | |
| 0.12 in | 266 °F | |
| RTI Imp | | UL 746B |
| 0.016 in | 266 °F | |
| 0.12 in | 266 °F | |
| RTI Str | | UL 746B |
| 0.016 in | 266 °F | |
| 0.12 in | 266 °F | |
| Electrical | Nominal Value Unit | Test Method |
| Surface Resistivity | > 1.0E+15 ohms | IEC 62631-3-2 |
| Volume Resistivity | > 1.0E+13 ohms·m | IEC 62631-3-1 |
| Comparative Tracking Index | 225 V | IEC 60112 |
| Flammability | Nominal Value Unit | Test Method |
| Flammability Classification (0.12 in) | V-0 | IEC 60695-11-10, -20 |

Notes

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

² 10°C/min

³ above Tg

⁴ through plane

⁵ in plane

