



CoolPoly® E5103

Celanese Corporation - Polyphenylene Sulfide

Tuesday, November 5, 2019

General Information

General

| | | | |
|-----------------|------------------------|-----------------|-----------------|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East | • Europe | • North America |
| | • Asia Pacific | • Latin America | |

ASTM & ISO Properties¹

| Physical | Nominal Value | Unit | Test Method |
|---|---------------|-------------------------------|----------------|
| Density | 1.54 | g/cm ³ | ISO 1183 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 1.41E+6 | psi | ISO 527-2/1A |
| Tensile Stress (Break) | 8990 | psi | ISO 527-2/1A/5 |
| Tensile Strain (Break) | 0.90 | % | ISO 527-2/1A/5 |
| Flexural Modulus (73°F) | 1.46E+6 | psi | ISO 178 |
| Flexural Stress (73°F) | 14200 | psi | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength (73°F) | 1.3 | ft·lb/in ² | ISO 179/1eA |
| Charpy Unnotched Impact Strength (73°F) | 3.6 | ft·lb/in ² | ISO 179/1eU |
| Thermal | Nominal Value | Unit | Test Method |
| Heat Deflection Temperature (66 psi, Unannealed) | 536 | °F | ISO 75-2/B |
| Heat Deflection Temperature (264 psi, Unannealed) | 491 | °F | ISO 75-2/A |
| Thermal Conductivity | | | ASTM E1461 |
| -- ² | 10 | Btu·in/hr/ft ² /°F | |
| -- ³ | 44 | Btu·in/hr/ft ² /°F | |
| -- ⁴ | 56 | Btu·in/hr/ft ² /°F | |
| Electrical | Nominal Value | Unit | Test Method |
| Volume Resistivity | 4.9 | ohms·cm | IEC 60093 |

Processing Information

| Injection | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature | 241 to 259 | °F |
| Drying Time | 4.0 to 6.0 | hr |
| Rear Temperature | 624 | °F |
| Middle Temperature | 649 | °F |
| Front Temperature | 660 | °F |
| Nozzle Temperature | 621 | °F |
| Processing (Melt) Temp | 644 to 655 | °F |
| Mold Temperature | 275 to 286 | °F |

Injection Notes

Feeding zone temperature: 40 to 47°C

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Notes

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

² Thruplane

³ Crossflow

⁴ Flow