



CoolPoly® E5107 Thermally Conductive Polyphenylene Sulfide (PPS)

CoolPoly E series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection molding grade polymers. CoolPoly is lightweight, netshape moldable and allows design freedom in applications previously restricted to metals. The E series is electrically conductive and provides inherent EMI/RFI shielding characteristics.

Thermal	SI/Metric		Testing Standard
Thermal Conductivity	1.4 W/mK		ASTM E1461
Thermal Diffusivity	0.0082 cm ² /sec		ASTM E1461
Specific Heat	1.1 J/g°C		ASTM E1461
Mechanical	SI/Metric	English	Testing Standard
Tensile Modulus	12600 MPa	1827 ksi	ISO 527-1
Tensile Strength	100 MPa	14500 psi	ISO 527-1
Nominal Strain @ Break	0.95 %	0.92 %	ISO 527-1
Flexural Strength	170 MPa	24650 psi	ISO 178
Flexural Modulus	11600 MPa	1682 ksi	ISO 178
Impact Strength			
Charpy Unnotched	20 kJ/m ²	10 ft-lb/in ²	ISO 179-1
Charpy Notched	5 kJ/m ²	2 ft-lb/in ²	ISO 179-1
Electrical	SI/Metric		Testing Standard
Volume Resistivity	9E7 ohm - cm		ASTM D257
Surface Resistivity	5E8 ohm/square		ASTM D257
Insulation Resistance	1E7 ohms		EN 50014
Physical	SI/Metric	English	Testing Standard
Density	1.59 g/cc	0.058 lb/in ³	ISO 1183
Mold Shrinkage			
Flow	0.4 %	0.004 in/in	ASTM D551
Cross-Flow	0.8 %	0.008 in/in	ASTM D551

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