

CoolPoly® D5112

Thermally Conductive Polyphenylene Sulfide (PPS)

Description

CoolPoly D 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 D series is electrically non-conductive and can be used for its dielectric properties.

Physical Properties	Value	Unit	Test Standard
Density	1730	kg/m ³	ISO 1183
Mold Shrinkage – Parallel	0.1	%	ISO 294-4
Mold Shrinkage – Normal	0.3	%	ISO 294-4
Mechanical Properties	Value	Unit	Test Standard
Tensile Modulus	26200	MPa	ISO 527-1
Tensile Strength	42	MPa	ISO 527-1
Strain @ Break	0.23	%	ISO 527-1
Flexural Modulus	19800	MPa	ISO 178
Flexural Strength	77	MPa	ISO 178
Charpy Unnotched (23°C)	4.00	kJ/m ²	ISO 179-1
Charpy Notched (23°C)	1.20	kJ/m ²	ISO 179-1
Thermal Properties	Value	Unit	Test Standard
Thermal Conductivity, In-Plane	6	W/mK	ASTM E1461
Thermal Diffusivity, In-Plane	0.0353	cm ² /sec	ASTM E1461
Specific Heat	0.949	J/g°C	ASTM E1461