Celanese
The chemistry inside innovation™

COOLPOLY® E5521 (PRELIMINARY)

Thermally Conductive Liquid Crystal Polymer
CoolPoly E series of thermally conductive plastics transfers heat, is lightweight, netshape moldable and allows design freedom in applications previously restricted to metals.

Typical mechanical properties

Tensile Modulus	7100	MPa	ISO 527-1/-2
Stress at break, 5mm/min	32	MPa	ISO 527-1/-2
Strain at break, 5mm/min	0.7	%	ISO 527-1/-2
Flexural Modulus	11100	MPa	ISO 178
Flexural Strength	56	MPa	ISO 178
Charpy impact strength, 23°C	3.4	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	2.5	kJ/m²	ISO 179/1eA

Thermal properties

Temp. of deflection under load, 1.8 MPa	198	°C	ISO 75-1/-2
Thermal conductivity in plane, in flow	34	W/(m K)	ASTM E 1461
Thermal conductivity through plane	4.5	W/(m K)	ASTM E 1461

Electrical properties

Electrical shielding, 1 GHz, 1.5mm	66	dB	ASTM D 4935

Other properties

Density	1750	kg/m³	ISO 1183

Injection

Drying Temperature	180	°C
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	0.01	%
Max. mould temperature	93 - 177	°C
Back pressure		MPa
Injection speed	fast	

Additional information

Injection molding	A low compression screw (3:1 or less) is recommended. Use a free flowing nozzle and free-flowing non-return valve with good sealing ability. Large reverse taper nozzle is suggested. Minimize suck-back. Material is moisture sensitive. Screw speed 75-150 rpm with cusion of 1-1.3 cm.

Processing Texts

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