Celanese
The chemistry inside innovation™

COOLPOLY® E5521 (PRELIMINARY)

COOLPOLY®

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

Product information

Resin Identification	LCP	ISO 1043
Part Marking Code	>LCP<	ISO 11469

Typical mechanical properties

Tensile modulus	7100	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	32	MPa	ISO 527-1/-2
Tensile 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
Poisson's ratio	0.35[C]		

[C]: Calculated

Thermal properties

Temperature of deflection under load, 1.8 MPa	198	°C	ISO 75-1/-2
Thermal conductivity, flow	34	W/(m K)	ISO 22007-2
Thermal conductivity, through plane	4.5	W/(m K)	ISO 22007-2

Physical/Other properties

Density	1750	kg/m³	ISO 1183

Injection

Back pressure	0.35	MPa

Characteristics

Processing	Injection Moulding
Special characteristics	Static dissipative, Specialty appearance, Low wear / Low friction, High Flow, Low Warpage

Additional information

Injection molding

Processing

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.