

COOLPOLY® D5506

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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.

Product information

Resin Identification	LCP-MD57	ISO 1043
Part Marking Code	>LCP-MD57<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.1 ^[1] %	ISO 294-4, 2577
Moulding shrinkage, normal	0.3 ^[1] %	ISO 294-4, 2577

[1]: RI data

Typical mechanical properties

Tensile modulus	9890 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	50 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	0.86 %	ISO 527-1/-2
Flexural modulus	13500 MPa	ISO 178
Flexural strength	79 MPa	ISO 178
Charpy impact strength, 23°C	7 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	3.6 kJ/m ²	ISO 179/1eA
Poisson's ratio	0.37	

Thermal properties

Temperature of deflection under load, 1.8 MPa	228 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	277 °C	ISO 75-1/-2
Thermal conductivity, flow	9.4 W/(m K)	ISO 22007-2
Thermal conductivity, crossflow	9 W/(m K)	ISO 22007-2
Thermal conductivity, through plane	1.9 W/(m K)	ISO 22007-2

Flammability

Burning Behav. at thickness h	V-0 class	IEC 60695-11-10
Thickness tested	1 mm	IEC 60695-11-10
UL recognition	yes	UL 94

Electrical properties

Relative permittivity, 1MHz	3.8	IEC 62631-2-1
Dissipation factor, 1MHz	220 E-4	IEC 62631-2-1
Volume resistivity	>1E13 ^[2] Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15 ^[3] Ohm	IEC 62631-3-2
Comparative tracking index, 100 drops	525 ^[4]	IEC 60112
Arc Resistance	300 s	UL 746B

[2]: Result value: 7.9E13 Ohm*m

[3]: Result value: 6.3E15 Ohm

[4]: Evaluation of CTI acc. to ASTM D 3638: 555 Volt

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Physical/Other properties

Density

1750 kg/m³

ISO 1183

Injection

Back pressure

0.35 MPa

Characteristics

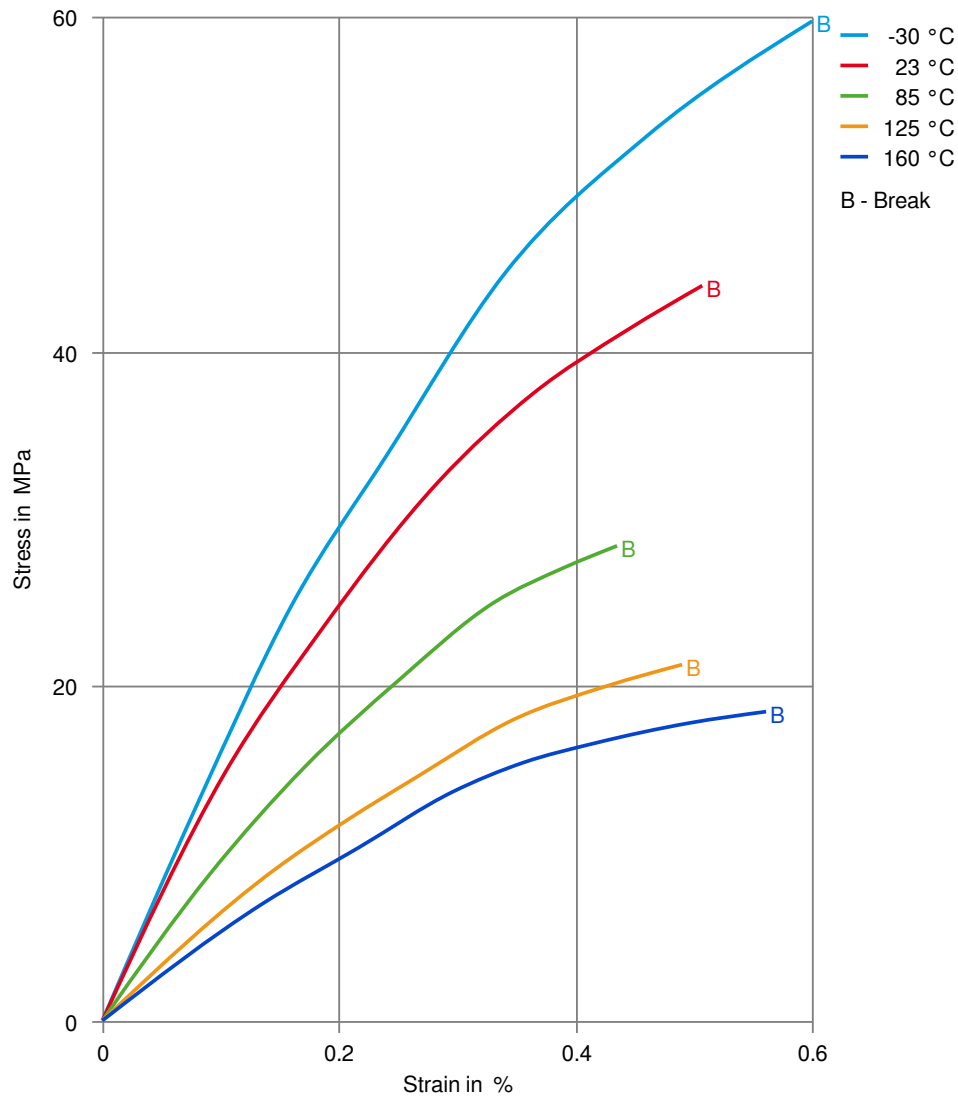
Processing

Injection Moulding

Special characteristics

Flame retardant, High Flow

Stress-strain



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Secant modulus-strain

