

COOLPOLY® D5506

CoolPoly D5506 is a thermally conductive, highly electrically insulative LCP based grade
 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.

Rheological properties

Moulding shrinkage range, parallel	0.1 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.3 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	9887 MPa	ISO 527-1/-2
Stress at break, 5mm/min	50 MPa	ISO 527-1/-2
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

Temp. of deflection under load, 1.8 MPa	228 °C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	277 °C	ISO 75-1/-2
Thermal conductivity in plane, in flow	9.4 W/(m K)	ASTM E 1461
Thermal conductivity in plane, cross flow	9 W/(m K)	ASTM E 1461
Thermal conductivity through plane	1.9 W/(m K)	ASTM E 1461

Flammability

Burning Behav. at thickness h	V-0 class	UL 94
Thickness tested	1.00 mm	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 Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15 Ohm	IEC 62631-3-2
Comparative tracking index	525	IEC 60112

Other properties

Density	1750 kg/m ³	ISO 1183
---------	------------------------	----------

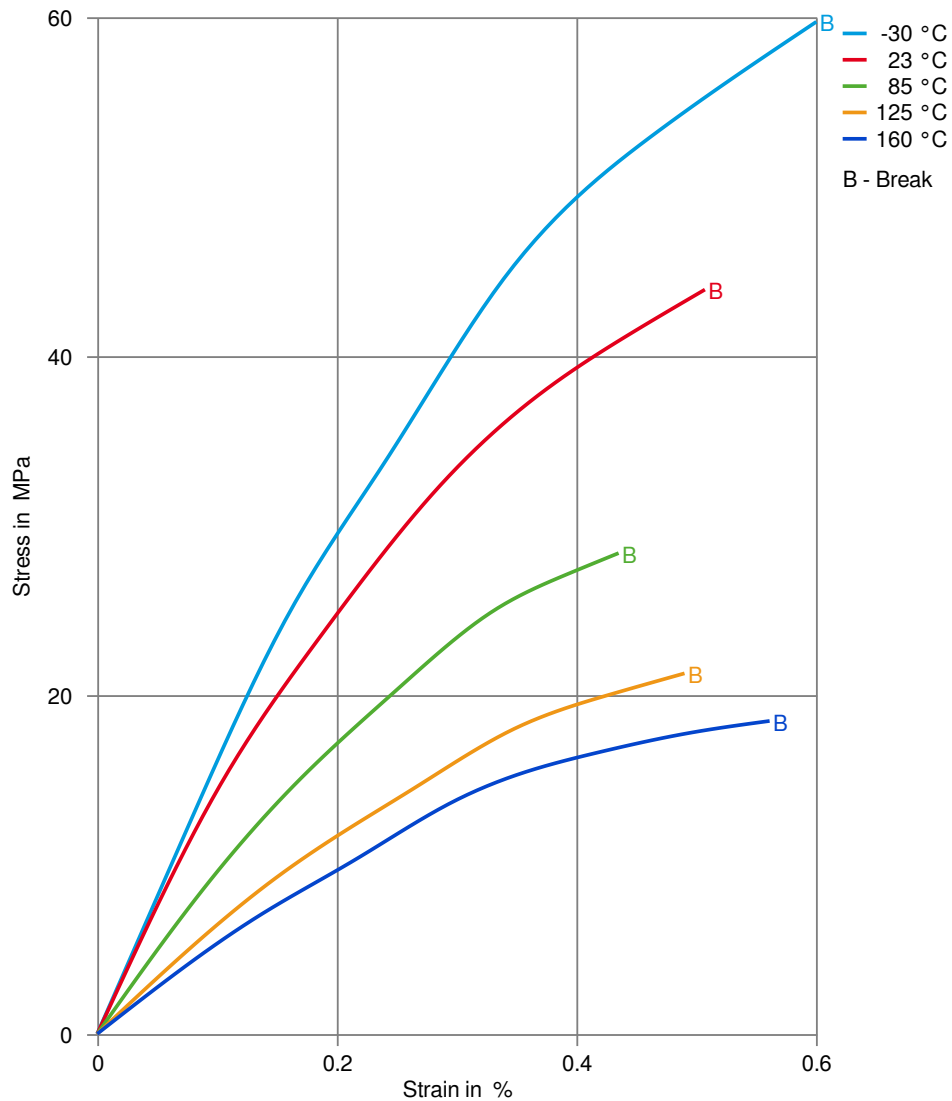


COOLPOLY® D5506

Injection

Drying Temperature	180 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Max. mould temperature	95 - 175 °C
Back pressure	MPa
Injection speed	fast

Stress-strain



COOLPOLY® D5506

Secant modulus-strain

