

ZENITE® 5145L R1 (PRELIMINARY)

Liquid Crystal Polymer

Product information

Resin Identification	LCP-GF45	ISO 1043
Part Marking Code	>LCP-GF45<	ISO 11469

Typical mechanical properties

Tensile modulus	16400 MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	130 MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	2 %	ISO 527-1/-2
Flexural modulus	17100 MPa	ISO 178
Flexural strength	210 MPa	ISO 178
Charpy impact strength, 23°C	17.1 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	15.4 kJ/m ²	ISO 179/1eA
Poisson's ratio	0.33 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	318 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	291 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	305 °C	ISO 75-1/-2

Flammability

Burning Behav. at thickness h	V-0 class	IEC 60695-11-10
Thickness tested	0.4 mm	IEC 60695-11-10

Electrical properties

Volume resistivity	1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	1E15 Ohm	IEC 62631-3-2
Relative permittivity, printed circuits and boards, 2.5 GHz	4.7	IEC 61189-2-721
Dissipation factor, printed circuits and boards, 2.5 GHz	62 E-4	IEC 61189-2-721

Physical/Other properties

Humidity absorption, 2mm	0.03 %	Sim. to ISO 62
Density	1740 kg/m ³	ISO 1183

Injection

Drying Recommended	yes
Drying Temperature	150 °C
Drying Time, Dehumidified Dryer	4 - 6 h
Processing Moisture Content	≤0.01 %
Melt Temperature Optimum	335 °C
Min. melt temperature	325 °C
Max. melt temperature	345 °C
Screw tangential speed	0.2 - 0.3 m/s
Mold Temperature Optimum	100 °C

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Min. mould temperature
Max. mould temperature

80 °C
120 °C

Characteristics

Processing

Injection Moulding

Special characteristics

Flame retardant, High impact or impact modified, Heat stabilised or stable to heat,
High Flow, Low Warpage, Improved weld line, Lead-free soldering resistant
