HK:+852-69575415 China GuangDong:+13538586433 ShangHai:+18816996168

Celanese
The chemistry inside innovation™

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/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	15.4	kJ/m²	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/m³	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	80	°C
Max. mould temperature	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