Celanese
The chemistry inside innovation™

ZENITE® 450LDS

Liquid Crystal Polymer

Product information

Resin Identification	LCP-MD27	ISO 1043
Part Marking Code	>LCP-MD27<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.7 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	17000 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	161 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3.7 %	ISO 527-1/-2
Flexural modulus	15000 MPa	ISO 178
Flexural strength	200 MPa	ISO 178
Charpy impact strength, 23 °C	43 kJ/m²	ISO 179/1eU
Poisson's ratio	0.33[C]	

[C]: Calculated

Thermal properties

Temperature of deflection under load, 1.8 MPa	223 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	255 °C	ISO 75-1/-2
Thermal conductivity, flow	2 W/(m K)	ISO 22007-2
Specific heat capacity of melt	1330 J/(kg K)	ISO 22007-4

Electrical properties

Relative permittivity, 1GHz	4	IEC 61189-2-721
Dissipation factor, printed circuits and boards, 2.5 GHz	30 E-4	IEC 61189-2-721

Physical/Other properties

Humidity absorption, 2mm	0.012 %	Sim. to ISO 62
Density	1680 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	340 °C
Min. melt temperature	335 °C
Max. melt temperature	345 °C
Screw tangential speed	0.2 - 0.3 m/s
Mold Temperature Optimum	100 °C
Min. mould temperature	80 °C
Max. mould temperature	120 °C
Ejection temperature	271 °C

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Characteristics

Processing	Injection Moulding
Special characteristics	Flame retardant, Heat stabilised or stable to heat, Specialty appearance, Low Warpage, Laser Direct Structurable