

# ZENITE® SEA10B

## Liquid Crystal Polymer

Zenite® SEA 10B is a 30% mineral filled grade. It offers thermal conductivity, excellent mechanical strength, surface appearance, low warpage, and excellent dimensional stability. Application for this grade is for a part with thin wall design in automotive and electronics.

### Product information

Resin Identification	LCP-MD30	ISO 1043
Part Marking Code	>LCP-MD30<	ISO 11469

### Rheological properties

Moulding shrinkage, parallel	0.1 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.6 %	ISO 294-4, 2577

### Typical mechanical properties

Tensile modulus	14000 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	143 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.7 %	ISO 527-1/-2
Flexural modulus	13000 MPa	ISO 178
Flexural strength	160 MPa	ISO 178
Flexural strain at failure	2.3 %	ISO 178
Charpy impact strength, 23°C	29 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	10 kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.33 <sup>[C]</sup>	

[C]: Calculated

### Thermal properties

Temperature of deflection under load, 1.8 MPa	240 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	8 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	60 E-6/K	ISO 11359-1/-2
Thermal conductivity, flow	2.5 W/(m K)	ISO 22007-2

### Electrical properties

Relative permittivity, 1MHz	3.63	IEC 62631-2-1
Dissipation factor, 1MHz	280 E-4	IEC 62631-2-1
Volume resistivity	>1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	1E14 Ohm	IEC 62631-3-2
Electric strength	30 kV/mm	IEC 60243-1
Comparative tracking index, 100 drops	175	IEC 60112

### Physical/Other properties

Humidity absorption, 2mm	0.03 %	Sim. to ISO 62
Density	1640 kg/m <sup>3</sup>	ISO 1183

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## 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	140 °C

## Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Additives	Mineral Filler
Special characteristics	Flame retardant, Heat stabilised or stable to heat, Specialty appearance, High Flow, Low Warpage