

ZENITE® SEA10N

Liquid Crystal Polymer

ZENITE SEA 10 N is a 30% mineral filled grade. It offers excellent antistatic property, surface appearance, low warpage, and excellent dimensional stability. Application for this grade is compact camera module, and other thin, small electronic parts.

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	13000 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	130 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.3 %	ISO 527-1/-2
Flexural modulus	13000 MPa	ISO 178
Flexural strength	150 MPa	ISO 178
Flexural strain at failure	2.3 %	ISO 178
Charpy notched impact strength, 23°C	10 kJ/m ²	ISO 179/1eA
Poisson's ratio	0.33 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	330 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	240 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	10 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	2.44 W/(m K)	ISO 22007-2
Thermal conductivity, crossflow	0.9 W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.48 W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	0.000001 m ² /s	ISO 22007-4
Effective thermal diffusivity, crossflow	4E-7 m ² /s	ISO 22007-4
Effective thermal diffusivity, through plane	2.1E-7 m ² /s	ISO 22007-4
Specific heat capacity of melt	1.38 J/(kg K)	ISO 22007-4

Electrical properties

Volume resistivity	2.3E12 Ohm.m	IEC 62631-3-1
Surface resistivity	9.8E11 Ohm	IEC 62631-3-2
Electric strength	38 kV/mm	IEC 60243-1

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Physical/Other properties

Humidity absorption, 2mm	0.02 %	Sim. to ISO 62
Density	1640 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	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
Ejection temperature	248 °C

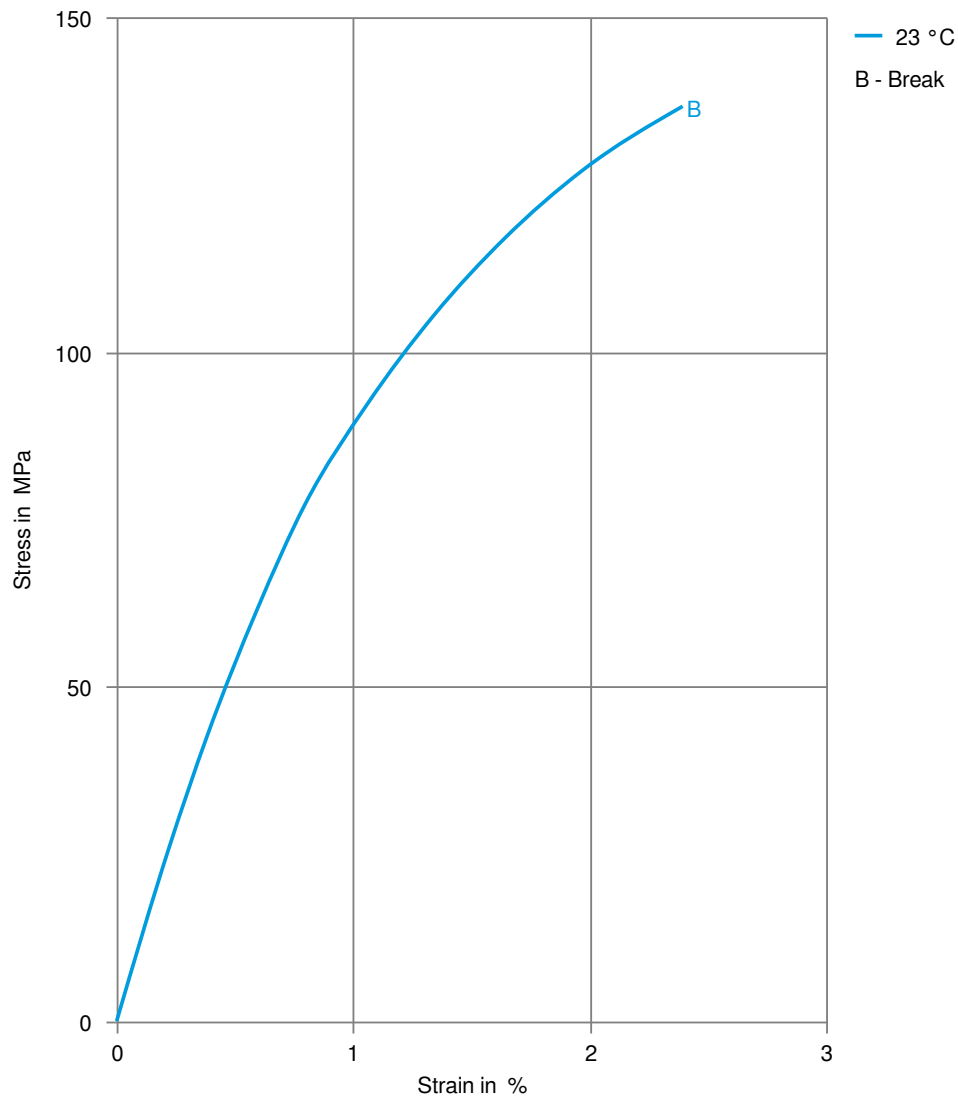
Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Additives	Mineral Filler
Special characteristics	Static dissipative, Flame retardant, Heat stabilised or stable to heat, Specialty appearance, High Flow, Low Warpage, Lead-free soldering resistant

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Stress-strain



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Secant modulus-strain

