

ZENITE® 7130

Liquid Crystal Polymer

Zenite® 7130 is a 30% glass fiber reinforced liquid crystal polymer for injection molding. It has excellent impact resistance and excellent heat deflection temperature.

Product information

Resin Identification	LCP-GF30	ISO 1043
Part Marking Code	>LCP-GF30<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.6 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	17000 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	150 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.5 %	ISO 527-1/-2
Flexural modulus	16500 MPa	ISO 178
Flexural strength	210 MPa	ISO 178
Charpy impact strength, 23°C	30 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	22 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	20 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	20 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	18 kJ/m ²	ISO 180/1A
Izod impact strength, 23°C	30 kJ/m ²	ISO 180/1U
Poisson's ratio	0.33 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	352 °C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	120 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	310 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	3 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	62 E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	V-0 class	IEC 60695-11-10
Thickness tested	0.4 mm	IEC 60695-11-10
UL recognition	yes	UL 94
Oxygen index	45 %	ISO 4589-1/-2

Electrical properties

Relative permittivity, 100Hz	4.1	IEC 62631-2-1
Relative permittivity, 1MHz	3.7	IEC 62631-2-1
Dissipation factor, 100Hz	140 E-4	IEC 62631-2-1
Dissipation factor, 1MHz	300 E-4	IEC 62631-2-1
Volume resistivity	>1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15 Ohm	IEC 62631-3-2

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Electric strength	45 kV/mm	IEC 60243-1
Comparative tracking index	175	IEC 60112

Physical/Other properties

Density	1620 kg/m ³	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	365 °C
Min. melt temperature	360 °C
Max. melt temperature	370 °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
Back pressure	3 MPa

Characteristics

Processing	Injection Moulding
Special characteristics	Flame retardant, Heat stabilised or stable to heat, High Flow, Lead-free soldering resistant

Additional information

Injection molding

Preprocessing

Drying Temperature = 150 °C
Drying Time, Dehumidified Dryer = 3h
Processing Moisture Content = <0.01 %

Processing

Melt Temperature Optimum = 365 °C
Melt Temperature Range = 360-370 °C
Mold Temperature Optimum = 80 °C
Mold Temperature Range = 40-150 °C