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ZENITE® 6130

Liquid Crystal Polymer

Zenite® 6130 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	0.1	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.8	%	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	%	ISO 527-1/-2
Flexural modulus	11000	MPa	ISO 178
Flexural strength	190	MPa	ISO 178
Compressive strength	113	MPa	ISO 604
Charpy impact strength, 23°C	40	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	30	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	35	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	30	kJ/m²	ISO 179/1eA
Poisson's ratio	0.33[C]		

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	335	°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	268	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	300	°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	70	E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.2	mm	IEC 60695-11-10
UL recognition	yes		UL 94
Oxygen index	41	%	ISO 4589-1/-2

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Electrical properties

Relative permittivity, 100Hz	4.5		IEC 62631-2-1
Relative permittivity, 1MHz	4		IEC 62631-2-1
Dissipation factor, 100Hz	150	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	310	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	36	kV/mm	IEC 60243-1
Comparative tracking index	175		IEC 60112

Physical/Other properties

Density	1620	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	355	°C
Min. melt temperature	350	°C
Max. melt temperature	360	°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

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 Recommended = Yes
Drying Temperature = 130 °C
Drying Time, Dehumidified Dryer = 4h
Processing Moisture Content = <0.01 %

Processing

Melt Temperature Optimum = 355 °C
Melt Temperature Range = 350-360 °C
Mold Temperature Optimum = 90 °C
Mold Temperature Range = 30-160 °C

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Automotive

OEM

General Motors

ADDITIONAL INFORMATION

Special Parts Approval, See Your CE Account Representative for Further Details.