Celanese
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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/m²	ISO 179/1eU
Charpy impact strength, -30°C	22	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	20	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	20	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	18	kJ/m²	ISO 180/1A
Izod impact strength, 23°C	30	kJ/m²	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/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	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