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ZENITE® 6330

Liquid Crystal Polymer

Zenite® 6330 is a 30% mineral reinforced liquid crystal polymer for injection molding. It has excellent impact resistance, excellent heat deflection temperature and is well suited for all kinds of demanding applications.

Product information

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

Rheological properties

Moulding shrinkage, parallel	0	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.7	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	10000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	130	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	5	%	ISO 527-1/-2
Flexural modulus	9500	MPa	ISO 178
Charpy impact strength, 23°C	60	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	40	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	9	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	8	kJ/m²	ISO 179/1eA
Poisson's ratio	0.34[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	245	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	275	°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	40	E-6/K	ISO 11359-1/-2
Thermal conductivity, flow	2.71	W/(m K)	ISO 22007-2
Thermal conductivity, crossflow	1.63	W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.45	W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	0.000001	m²/s	ISO 22007-4
Effective thermal diffusivity, crossflow	0.000001	m²/s	ISO 22007-4
Effective thermal diffusivity, through plane	2E-7	m²/s	ISO 22007-4
Specific heat capacity of melt	1410	J/(kg K)	ISO 22007-4

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	0.85	mm	IEC 60695-11-10
UL recognition	yes		UL 94
Oxygen index	47	%	ISO 4589-1/-2

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Electrical properties

Relative permittivity, 100Hz	3.8		IEC 62631-2-1
Relative permittivity, 1MHz	3.4		IEC 62631-2-1
Dissipation factor, 100Hz	140	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	35	kV/mm	IEC 60243-1
Comparative tracking index	200		IEC 60112

Physical/Other properties

Density	1640	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
Ejection temperature	258	°C

Characteristics

Processing	Injection Moulding
Additives	Mineral Filler
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 = 160°C
Drying Time, Dehumidified Dryer = 6h
Processing Moisture Content = <0.01 %

Processing

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

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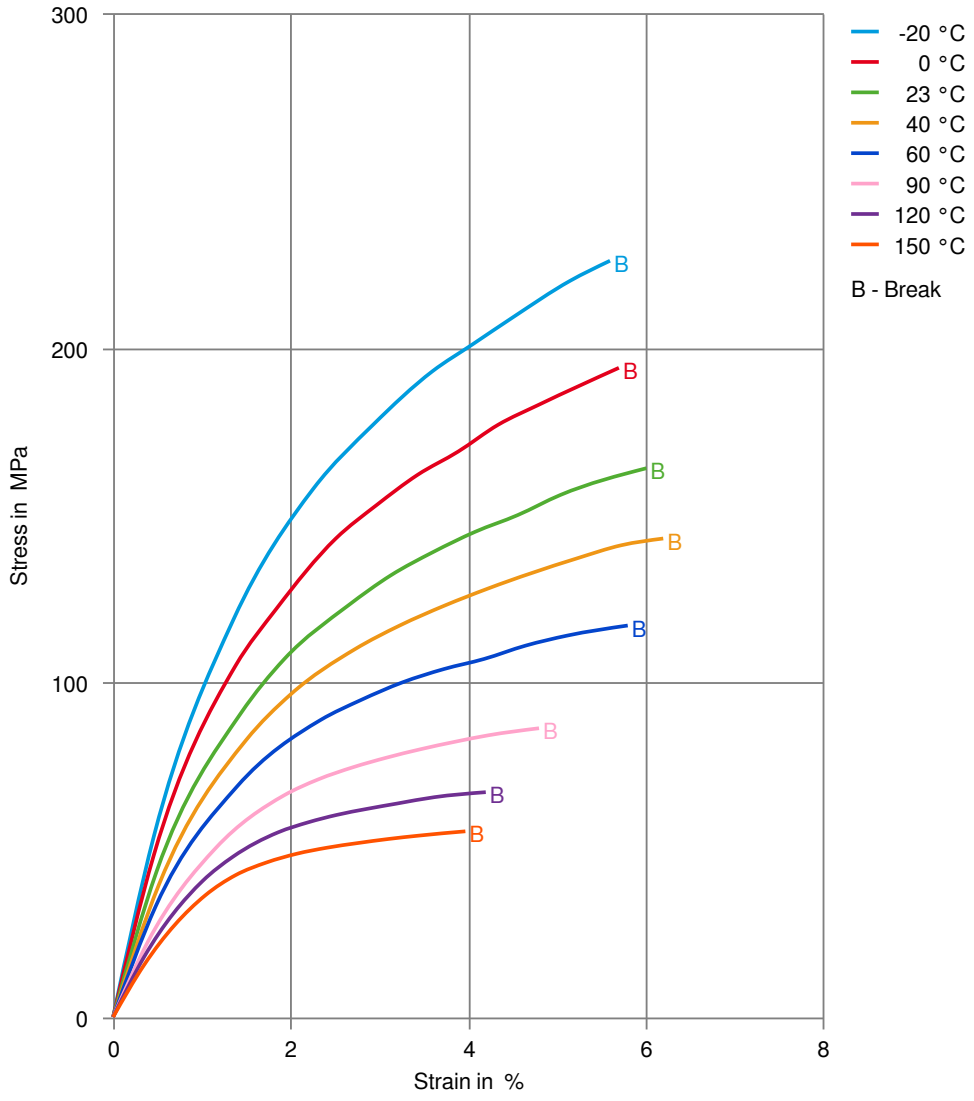
Mold Temperature Range = 30-160 °C

Stress-strain



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