Celanese
The chemistry inside innovation™

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

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

Typical mechanical properties

Tensile modulus	1.45E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	18900	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	5	%	ISO 527-1/-2
Flexural modulus	1.38E6	psi	ISO 178
Charpy impact strength, 23°C	28.5	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	19	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	4.28	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	3.81	ftlb/in²	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	635	°F	ISO 11357-1/-3
Glass transition temperature, 10°C/min	248	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	473	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	527	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.04	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.222	E-4/°F	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	0.0591	in	IEC 60695-11-10
Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.0335	in	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	889	kV/in	IEC 60243-1
Comparative tracking index	200		IEC 60112

Physical/Other properties

Density	0.0592	lb/in^3	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	302	°F
Drying Time, Dehumidified Dryer	4 - 6	h
Processing Moisture Content	≤0.01	%
Melt Temperature Optimum	671	°F
Min. melt temperature	662	°F
Max. melt temperature	680	°F
Max. screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	212	°F
Min. mold temperature	176	°F
Max. mold temperature	248	°F
Ejection temperature	496	°F

Characteristics

Processing	Injection Molding
Special characteristics	Flame retardant, Heat stabilized 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 %

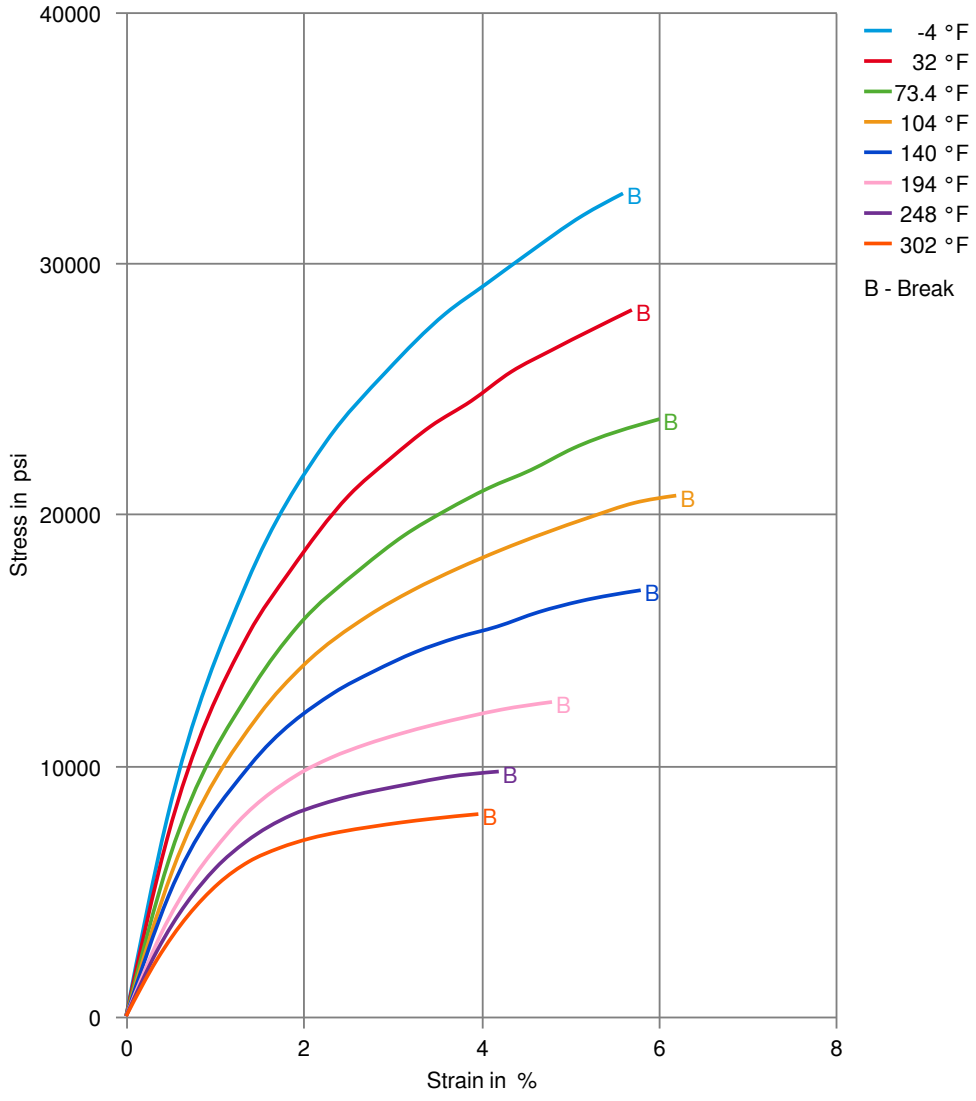
Processing

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

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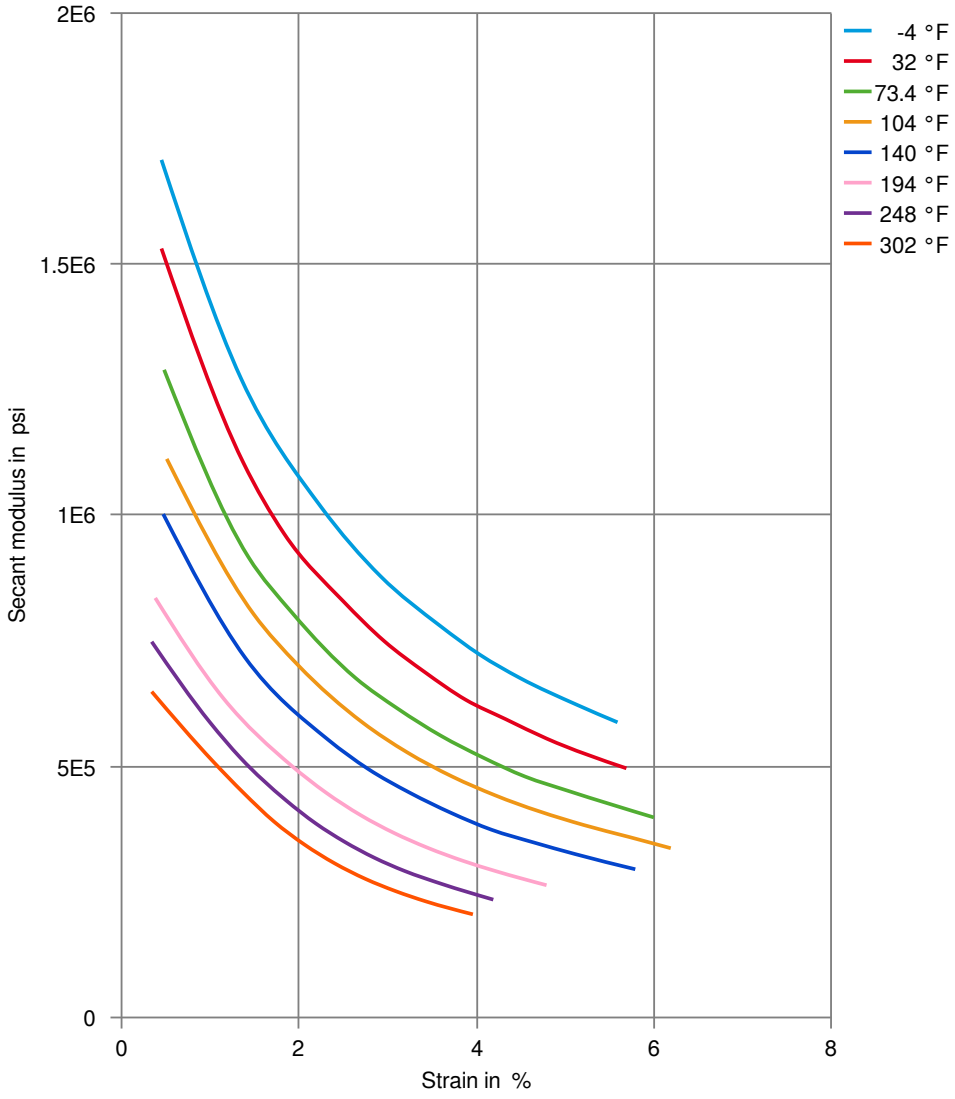
Stress-strain



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Secant modulus-strain



Revised: 2025-03-20 Source: Celanese Materials Database

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