Celanese
The chemistry inside innovation™

ZENITE® 7130 - LCP

Description

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

Physical properties	Value	Unit	Test Standard
Density	**1620**	kg/m³	ISO 1183
Molding shrinkage, parallel (flow)	**0.01**	%	ISO 294-4, 2577
Molding shrinkage, transverse normal	**0.6**	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
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, 23°C	**16500**	MPa	ISO 178
Flexural strength, 23°C	**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 impact notched, 23°C	**18**	kJ/m²	ISO 180/1A
Izod impact unnotched, 23°C	**30**	kJ/m²	ISO 180/1U

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	**352**	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	**120**	°C	ISO 11357-1,-2,-3
DTUL at 1.8 MPa	**310**	°C	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	**0.03**	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	**0.62**	E-4/°C	ISO 11359-2
Limiting oxygen index (LOI)	**45**	%	ISO 4589-1/-2
Flammability at thickness h	**V-0**	class	UL 94
thickness tested (h)	**0.40**	mm	UL 94
UL recognition (h)	**UL**	-	UL 94

Electrical properties	Value	Unit	Test Standard
Dielectric constant (Dk), 100Hz	**4.1**	-	IEC 60250
Dielectric constant (Dk), 1MHz	**3.7**	-	IEC 60250
Dissipation factor, 100Hz	**140**	E-4	IEC 60250
Dissipation factor, 1MHz	**300**	E-4	IEC 60250
Volume resistivity, 23°C	**>1E13**	Ohm*m	IEC 62631-3-1
Surface resistivity, 23°C	**>1E15**	Ohm	IEC 62631-3-2
Electric strength, 23°C (AC)	**45**	kV/mm	IEC 60243-1
Comparative tracking index	**PLC 4**	-	UL 746

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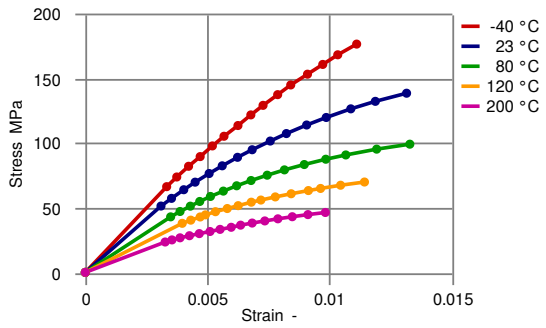
Diagrams

True Stress-strain



Typical injection moulding processing conditions

Pre Drying	Value	Unit
Necessary low maximum residual moisture content	**0.01**	%
Drying time	**3**	h
Drying temperature	**≥150**	°C

Temperature	Value	Unit
Hopper temperature	**20 - 30**	°C
Feeding zone temperature	**40 - 60**	°C
Zone1 temperature	**355 - 365**	°C
Zone2 temperature	**360 - 370**	°C
Zone3 temperature	**360 - 370**	°C
Zone4 temperature	**360 - 370**	°C
Nozzle temperature	**360 - 370**	°C
Melt temperature	**360 - 370**	°C
Mold temperature	**80 - 120**	°C

Pressure	Value	Unit
Injection pressure	**500 - 1500**	bar
Hold pressure	**500 - 1500**	bar
Back pressure max.	**30**	bar

Other text information

Injection molding

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

Injection Molding Preprocessing

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

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Characteristics

Special Characteristics	Flame retardant, High flow, Lead-free soldering
Product Categories	Glass reinforced
Processing	Injection molding

General Disclaimer

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