

ZENITE® 7130 | LCP | Glass Reinforced

Description

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/m ³	ISO 1183
Mold shrinkage - parallel	0.01	%	ISO 294-4
Mold shrinkage - normal	0.6	%	ISO 294-4

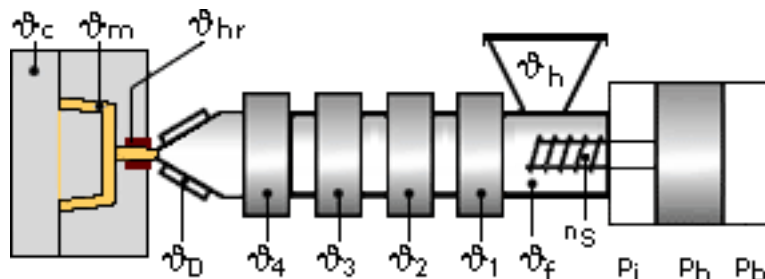
Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	17000	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	150	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	1.5	%	ISO 527-2/1A
Flexural modulus (23°C)	13000	MPa	ISO 178
Flexural strength (23°C)	210	MPa	ISO 178
Charpy impact strength @ 23°C	30.0	kJ/m ²	ISO 179/1eU
Charpy impact strength @ -30°C	22.0	kJ/m ²	ISO 179/1eU
Charpy notched impact strength @ 23°C	20.0	kJ/m ²	ISO 179/1eA
Charpy notched impact strength @ -30°C	20.0	kJ/m ²	ISO 179/1eA
Unnotched impact str (Izod) @ 23°C	30	kJ/m ²	ISO 180/1U
Notched impact strength (Izod) @ 23°C	18.0	kJ/m ²	ISO 180/1A

Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	352	°C	ISO 11357-1,-2,-3
Glass transition temperature (10°C/min)	120	°C	ISO 11357-1,-2,-3
DTUL @ 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)	45.0	%	ISO 4589
Flammability at thickness h	V-0	class	UL94
thickness tested (h)	0.4	mm	UL94
UL recognition (h)	UL	-	UL94

Electrical properties	Value	Unit	Test Standard
Relative permittivity - 100 Hz	4.1	-	IEC 60250
Relative permittivity - 1 MHz	3.7	-	IEC 60250
Dissipation factor - 100 Hz	140	E-4	IEC 60250
Dissipation factor - 1 MHz	300	E-4	IEC 60250
Volume resistivity	>1E13	Ohm*m	IEC 60093
Surface resistivity	>1E15	Ohm	IEC 60093
Electric strength	45	kV/mm	IEC 60243-1
Comparative tracking index CTI	175	-	IEC 60112

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Typical injection moulding processing conditions



Pre Drying:

Necessary low maximum residual moisture content: 0.01%

Drying time: 3 h

Drying temperature: 150 - - °C

Temperature:

	ϑMold	ϑMelt	ϑNozzle	ϑZone4	ϑZone3	ϑZone2	ϑZone1	ϑFeed	ϑHopper
min (°C)	80	360	360	360	360	360	355	40	20
max (°C)	120	370	370	370	370	370	365	60	30

Pressure:

	Inj press	Hold press	Back pressure
min (bar)	500	500	0
max (bar)	1500	1500	30

Injection Molding

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

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