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/m³	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/m²	ISO 179/1eU
Charpy impact strength @ -30°C	**22.0**	kJ/m²	ISO 179/1eU
Charpy notched impact strength @ 23°C	**20.0**	kJ/m²	ISO 179/1eA
Charpy notched impact strength @ -30°C	**20.0**	kJ/m²	ISO 179/1eA
Unnotched impact str (Izod) @ 23°C	**30**	kJ/m²	ISO 180/1U
Notched impact strength (Izod) @ 23°C	**18.0**	kJ/m²	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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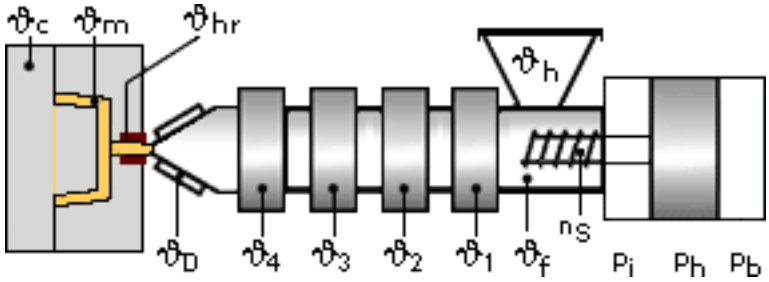
Typical injection moulding processing conditions



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

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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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