

Zenite® 7145L

Liquid Crystal Polymer
Celanese Corporation

Message:

Zenite® 7145L is a 45% glass fiber reinforced and lubricated liquid crystal polymer for injection molding. It has excellent impact resistance and high heat deflection temperature.

General Information			
UL YellowCard	E344082-100831275		
Filler / Reinforcement	Glass fiber reinforced material, 45% filler by weight		
Additive	Lubricant		
Features	Impact resistance, good		
	Heat resistance, high		
	Lubrication		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.74	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.50	%	ISO 294-4
Flow direction	0.050	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	58		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	18000	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	120	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	0.90	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	17800	MPa	ISO 178
Flexural Stress (23°C)	180	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	10	kJ/m ²	ISO 179/1eA
23°C	10	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	13	kJ/m ²	ISO 179/1eU
23°C	18	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	295	°C	ISO 75-2/A
Melting Temperature ¹	355	°C	ISO 11357-3

Linear thermal expansion coefficient			ISO 11359-2
Flow	7.0E-6	cm/cm/°C	ISO 11359-2
Lateral	2.4E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength	36	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.80		IEC 60250
1 MHz	4.40		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	0.013		IEC 60250
1 MHz	0.024		IEC 60250
Comparative Tracking Index	200	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-0		UL 94
Oxygen Index	45	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	Test Method
Density of Melt	1.450	g/cm ³	Internal method
Ejection Temperature	275	°C	Internal method
Specific Heat Capacity of Melt	1500	J/kg/°C	Internal method
Thermal Conductivity of Melt	0.32	W/m/K	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	3.0	hr	
Suggested Max Moisture	0.010	%	
Hopper Temperature	20.0 - 30.0	°C	
Rear Temperature	355 - 365	°C	
Middle Temperature	360 - 370	°C	
Front Temperature	360 - 370	°C	
Nozzle Temperature	360 - 370	°C	
Processing (Melt) Temp	360 - 370	°C	
Mold Temperature	80.0 - 120	°C	
Injection Pressure	50.0 - 150	MPa	
Holding Pressure	50.0 - 150	MPa	
Back Pressure	0.00 - 3.00	MPa	
Injection instructions			
Feed Temperature: 40 to 60°CZone 4 Temperature: 360 to 370°C			
NOTE			
1.	10°C/min		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

