



Zenite® 7145L

Celanese Corporation - Liquid Crystal Polymer

Sunday, November 3, 2019

General Information

Product Description

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

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • Asia Pacific • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 45% Filler by Weight
Additive	• Lubricant
Features	• Good Impact Resistance • Lubricated
RoHS Compliance	• Contact Manufacturer
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.74	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.50	%	
Flow	0.10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2.61E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	17400	psi	ISO 527-2/1A/5
Tensile Strain (Break)	0.90	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	2.58E+6	psi	ISO 178
Flexural Stress (73°F)	26100	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	4.8	ft-lb/in ²	
73°F	4.8	ft-lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	6.2	ft-lb/in ²	
73°F	8.6	ft-lb/in ²	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	58		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	563	°F	ISO 75-2/A
Melting Temperature ²	671	°F	ISO 11357-3
CLTE - Flow	3.9E-6	in/in/°F	ISO 11359-2
CLTE - Transverse	1.3E-5	in/in/°F	ISO 11359-2

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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	910	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.80		
1 MHz	4.40		
Dissipation Factor			IEC 60250
100 Hz	0.013		
1 MHz	0.024		
Comparative Tracking Index	200	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	V-0		UL 94
Oxygen Index	45	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.45	g/cm ³	Internal Method
Melt Thermal Conductivity	2.2	Btu·in/hr/ft ² /°F	Internal Method
Ejection Temperature	527	°F	
Specific Heat Capacity of Melt	0.359	Btu/lb/°F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	302	°F
Drying Time	3.0	hr
Suggested Max Moisture	0.010	%
Hopper Temperature	68 to 86	°F
Rear Temperature	671 to 689	°F
Middle Temperature	680 to 698	°F
Front Temperature	680 to 698	°F
Nozzle Temperature	680 to 698	°F
Processing (Melt) Temp	680 to 698	°F
Mold Temperature	176 to 248	°F
Back Pressure	< 435	psi

Injection Notes

Feeding zone temperature: 40 to 60°C
Zone4 temperature: 360 to 370°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min