

ZENITE® 7145L

45% glass reinforced, lubricated

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.

Rheological properties

Moulding shrinkage range, parallel	0.1 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.5 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	18000 MPa	ISO 527-1/-2
Stress at break, 5mm/min	120 MPa	ISO 527-1/-2
Strain at break, 5mm/min	0.9 %	ISO 527-1/-2
Flexural Modulus	17800 MPa	ISO 178
Flexural Strength	180 MPa	ISO 178
Charpy impact strength, 23°C	18 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	13 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	10 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	10 kJ/m ²	ISO 179/1eA
Hardness, Rockwell, M-scale	58	ISO 2039-2

Thermal properties

Melting temperature, 10°C/min	355 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	295 °C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	7 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	24 E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.32 W/(m K)	Internal
Spec. heat capacity of melt	1500 J/(kg K)	Internal

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0 class	UL 94
Thickness tested	1.5 mm	UL 94
Burning Behav. at thickness h	V-0 class	UL 94
Thickness tested	1.50 mm	UL 94
UL recognition	yes	UL 94
Oxygen index	45 %	ISO 4589-1/-2

Electrical properties

Relative permittivity, 100Hz	4.8	IEC 62631-2-1
Relative permittivity, 1MHz	4.4	IEC 62631-2-1
Dissipation factor, 100Hz	130 E-4	IEC 62631-2-1
Dissipation factor, 1MHz	240 E-4	IEC 62631-2-1
Volume resistivity	>1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15 Ohm	IEC 62631-3-2



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Electric strength
Comparative tracking index

36 kV/mm
PLC 3 PLC

IEC 60243-1
UL 746A

Other properties

Density
Density of melt

1740 kg/m³
1450 kg/m³

ISO 1183
Internal

Injection

Drying Temperature
Drying Time, Dehumidified Dryer
Processing Moisture Content
Max. mould temperature
Back pressure
Ejection temperature

≥150 °C
3 h
0.01 %
80 - 120 °C
3 MPa
275 °C

Internal

Additional 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

Processing Texts

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 %

