

ZENITE® 5145L

45% glass reinforced, lubricated

Zenite® 5145L is a 45% glass fiber reinforced and toughened liquid crystal polymer for injection molding. It has improved toughness.

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	15000 MPa	ISO 527-1/-2
Stress at break, 5mm/min	115 MPa	ISO 527-1/-2
Strain at break, 5mm/min	3.1 %	ISO 527-1/-2
Flexural Modulus	11000 MPa	ISO 178
Flexural Strength	190 MPa	ISO 178
Compressive stress at 1% strain	21.3 MPa	ISO 604

Thermal properties

Melting temperature, 10°C/min	319 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	290 °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	60 E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.35 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	0.80 mm	UL 94
UL recognition	yes	UL 94
Oxygen index	33 %	ISO 4589-1/-2

Electrical properties

Relative permittivity, 1MHz	3.9	IEC 62631-2-1
Dissipation factor, 1MHz	180 E-4	IEC 62631-2-1
Volume resistivity	1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	1E15 Ohm	IEC 62631-3-2
Electric strength	45 kV/mm	IEC 60243-1
Comparative tracking index	PLC 3 PLC	UL 746A



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Other properties

Density	1750 kg/m ³	ISO 1183
Density of melt	1480 kg/m ³	Internal

Injection

Drying Temperature	150 °C	
Drying Time, Dehumidified Dryer	3 h	
Processing Moisture Content	0.01 %	
Melt Temperature Optimum	335 °C	Internal
Max. mould temperature	80 - 120 °C	
Back pressure	3 MPa	
Ejection temperature	265 °C	Internal

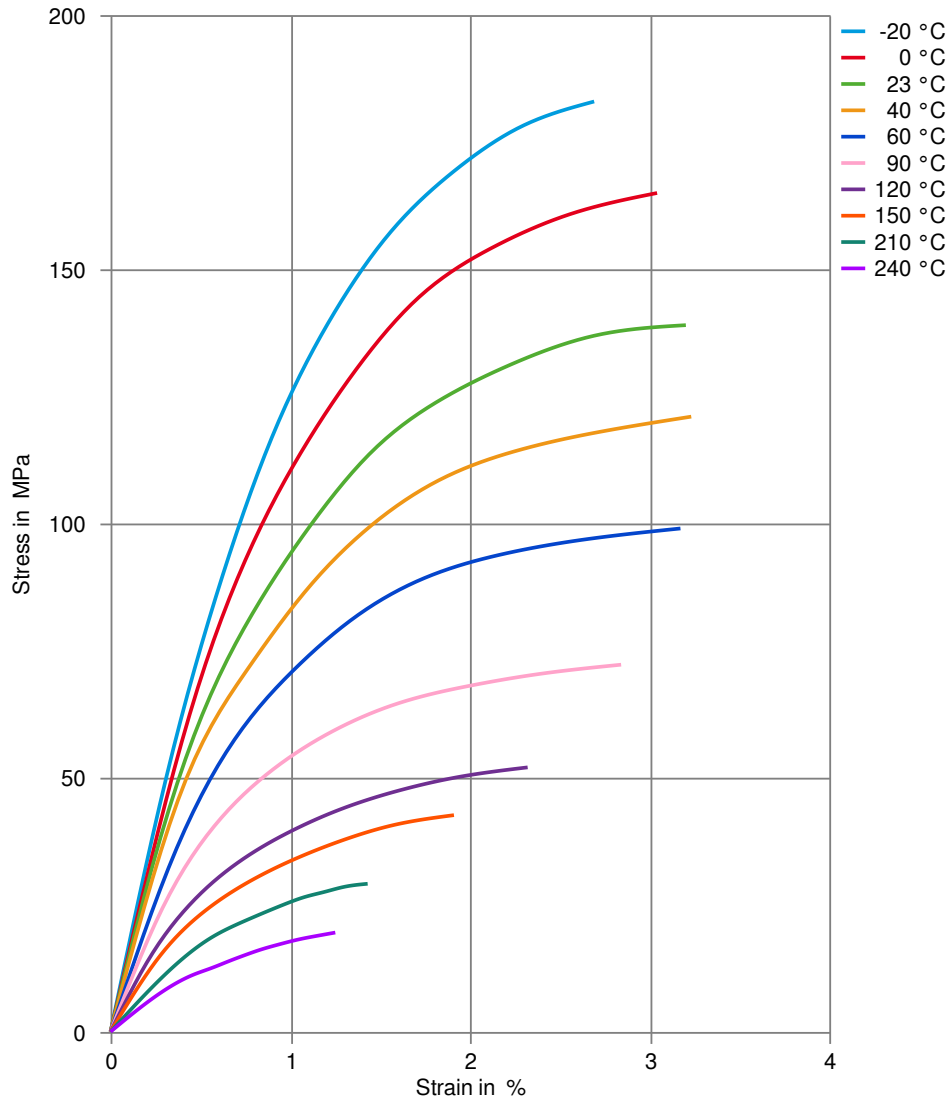
Additional information

Injection molding	Melt Temperature Optimum = 335 °C
	Melt Temperature Range = 325-345 °C
	Mold Temperature Optimum = 80 °C
	Mold Temperature Range = 40-150 °C



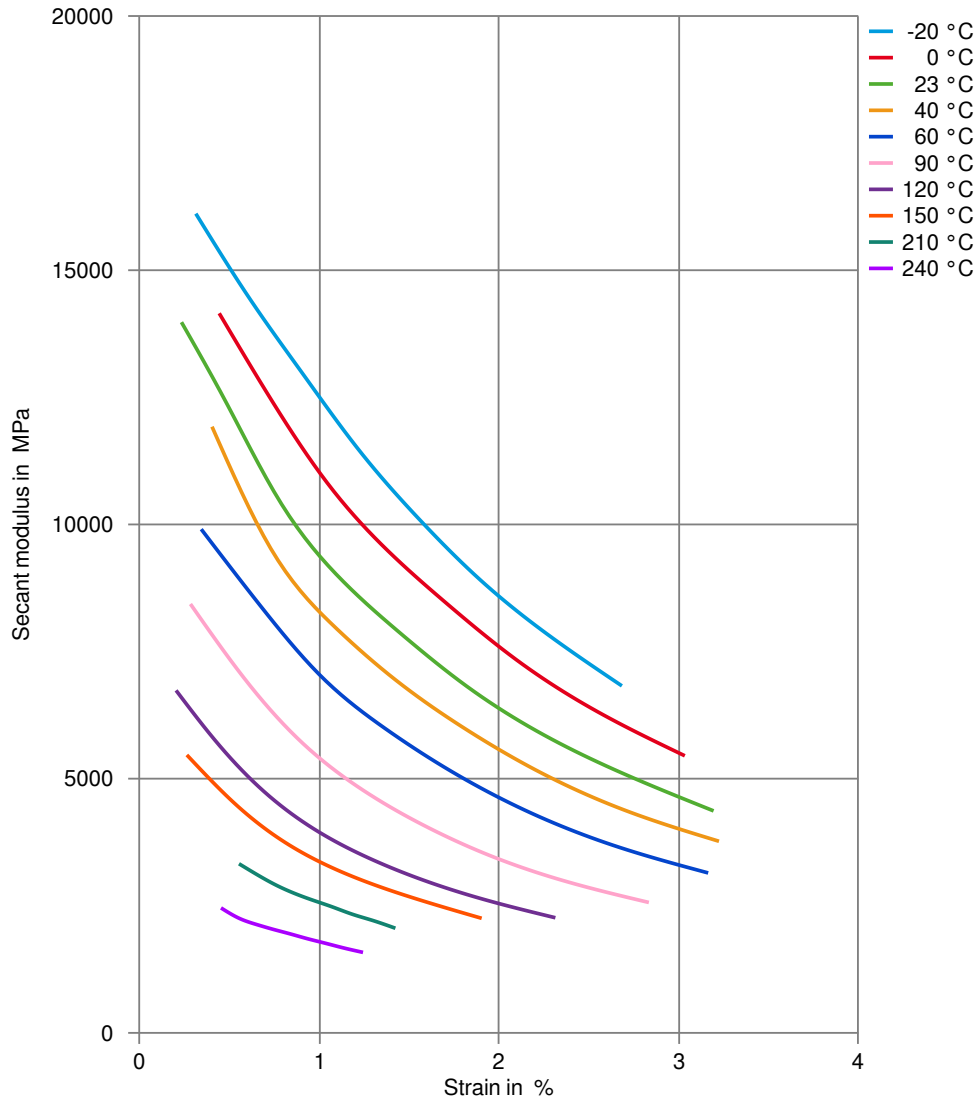
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Stress-strain



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Secant modulus-strain



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Processing Texts

Injection molding

Melt Temperature Optimum = 335°C
Melt Temperature Range = 325-345°C
Mold Temperature Optimum = 80°C
Mold Temperature Range = 40-150°C

Injection molding Preprocessing

Drying Recommended = Yes
Drying Temperature = 150°C
Drying Time, Dehumidified Dryer = 3h
Processing Moisture Content = <0.01 %

