

ZENITE® 55201

50% glass/mineral reinforced, lubricated

Zenite® ZE55201 is a 50% mineral/glass fiber reinforced liquid crystal polymer for injection molding. and It is specifically suitable for applications requiring ultra flatness.

Rheological properties

Moulding shrinkage, parallel	0.1 %	ISO 294-4, 2577
Moulding shrinkage range, parallel	0.1 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.3 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.3 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	15800 MPa	ISO 527-1/-2
Stress at break, 5mm/min	88 MPa	ISO 527-1/-2
Strain at break, 5mm/min	1.4 %	ISO 527-1/-2
Flexural Modulus	12500 MPa	ISO 178
Flexural Strength	165 MPa	ISO 178
Compressive stress at 1% strain	21.3 MPa	ISO 604
Charpy notched impact strength, 23°C	3.6 kJ/m ²	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	335 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	290 °C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	300 °C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	15 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	27 E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.4 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	41 %	ISO 4589-1/-2

Electrical properties

Relative permittivity, 1MHz	4	IEC 62631-2-1
Dissipation factor, 100Hz	310 E-4	IEC 62631-2-1
Dissipation factor, 1MHz	310 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	37 kV/mm	IEC 60243-1



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Comparative tracking index

PLC 3 PLC

UL 746A

Other properties

Density

1850 kg/m³

ISO 1183

Density of melt

1620 kg/m³

Internal

Injection

Drying Temperature

≥150 °C

Drying Time, Dehumidified Dryer

3 h

Processing Moisture Content

0.01 %

Melt Temperature Optimum

340 °C

Internal

Max. mould temperature

80 - 120 °C

Back pressure

3 MPa

Ejection temperature

270 °C

Internal

Additional information

Injection molding

Melt Temperature Range = 330-350°C

Melt Temperature Optimum = 335°C

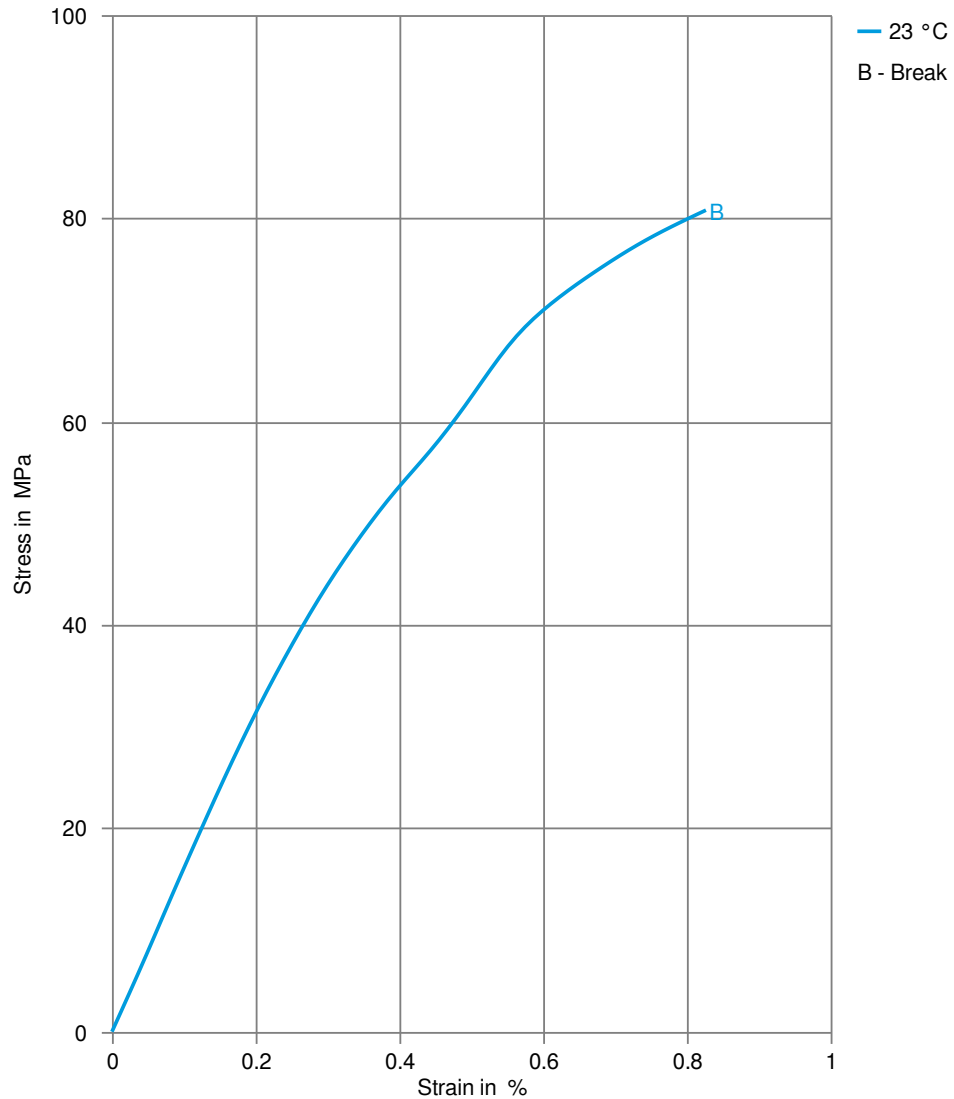
Mold Temperature Optimum = 80°C

Mold Temperature Range = 40-150°C



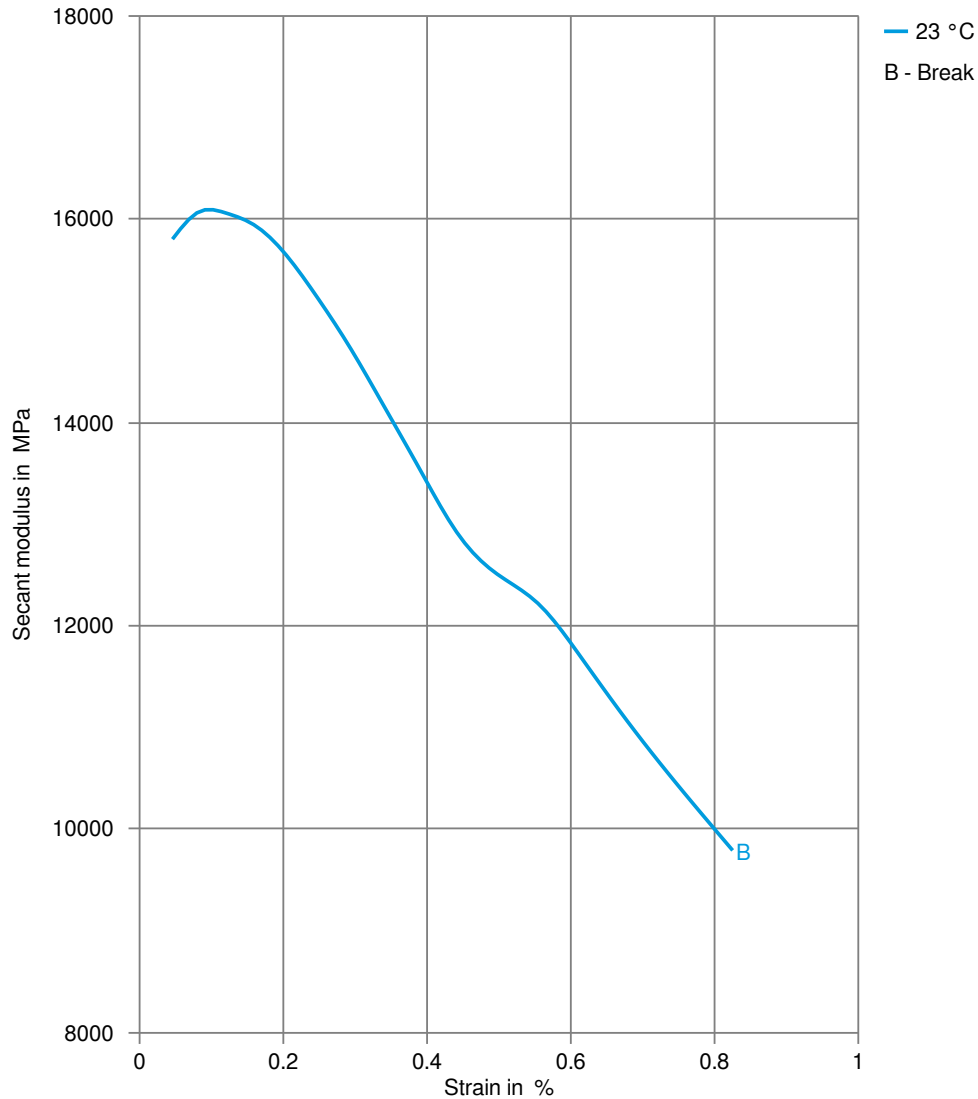
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Stress-strain



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Secant modulus-strain



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Processing Texts

Injection molding

Melt Temperature Range = 330-350°C
Melt Temperature Optimum = 335°C
Mold Temperature Optimum = 80°C
Mold Temperature Range = 40-150°C

Injection molding Preprocessing

Drying Temperature = 140°C
Drying Time, Dehumidified Dryer = 4-6h
Processing Moisture Content = <0.01 %

