

ZENITE® 55205

Liquid Crystal Polymer

Zenite® ZE55205 is a black reinforced LCP resin with a high dielectric constant.

Product information

Resin Identification	LCP-GF45	ISO 1043
Part Marking Code	>LCP-GF45<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.1 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.6 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	14300 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	125 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5 %	ISO 527-1/-2
Flexural modulus	12200 MPa	ISO 178
Flexural strength	190 MPa	ISO 178
Charpy impact strength, 23°C	36 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	30 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	29 kJ/m ²	ISO 180/1A
Izod impact strength, 23°C	35 kJ/m ²	ISO 180/1U
Poisson's ratio	0.33 ^[C]	

[C]: Calculated

Thermal properties

Temperature of deflection under load, 1.8 MPa	276 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	8.8 ^[1] E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	70 ^[1] E-6/K	ISO 11359-1/-2

[1]: Temperature range: -45°C to 200°C

Electrical properties

Relative permittivity, 1MHz	4.52	IEC 62631-2-1
Dissipation factor, 1MHz	190 E-4	IEC 62631-2-1

Physical/Other properties

Density	1890 kg/m ³	ISO 1183
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Injection

Drying Recommended	yes
Drying Temperature	150 °C
Drying Time, Dehumidified Dryer	4 - 6 h
Processing Moisture Content	≤0.01 %
Melt Temperature Optimum	340 °C
Min. melt temperature	330 °C
Max. melt temperature	350 °C

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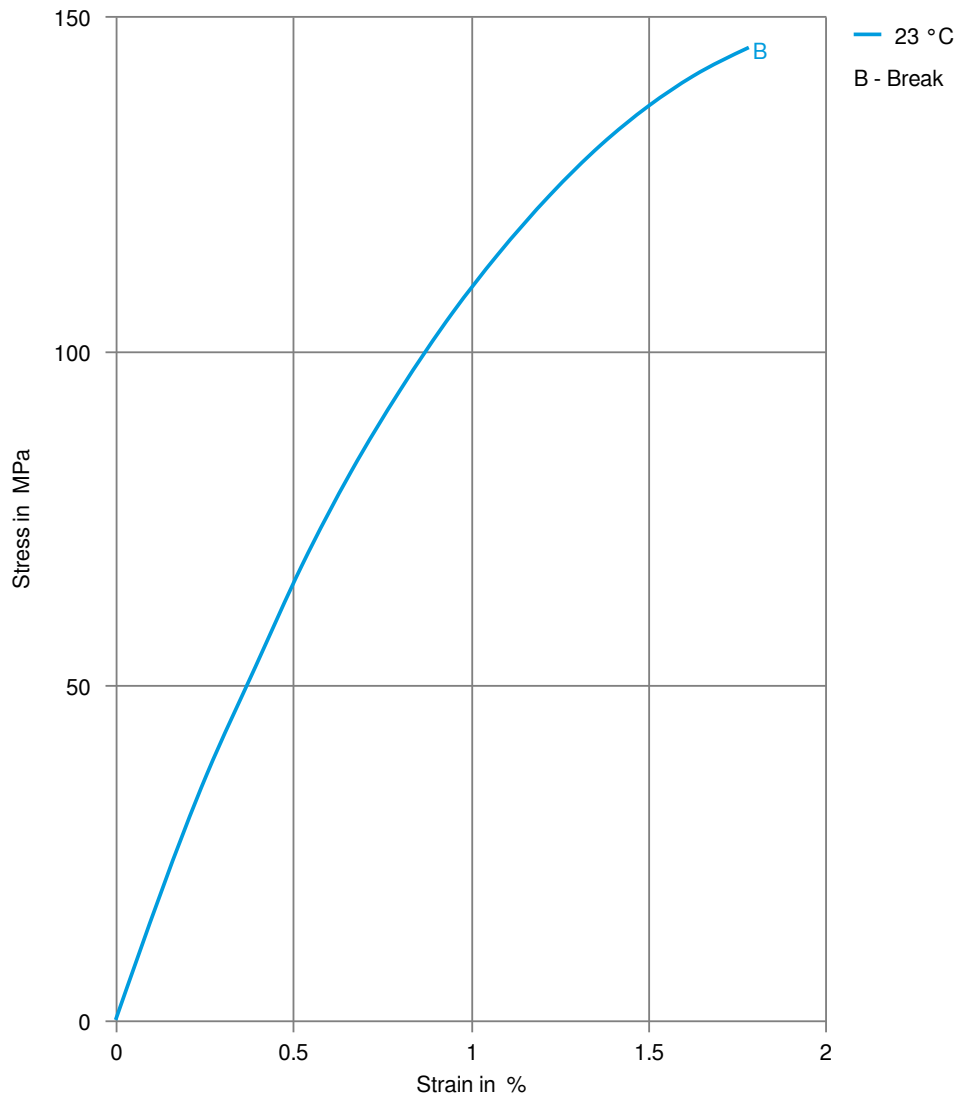
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Screw tangential speed	0.2 - 0.3 m/s
Mold Temperature Optimum	100 °C
Min. mould temperature	80 °C
Max. mould temperature	120 °C
Back pressure	3 MPa

Characteristics

Processing	Injection Moulding
Special characteristics	Flame retardant, Heat stabilised or stable to heat, High Flow, Lead-free soldering resistant

Stress-strain



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Secant modulus-strain

