

ZENITE® 88410NXL

Liquid Crystal Polymer

40% glass reinforced, high weld-line strength, low warpage and with added lubricity.

Chemical abbreviation according to ISO 1043-1 : LCP

Product information

Resin Identification	(LCP+PPS)-GF4 0	ISO 1043
Part Marking Code	>(LCP+PPS)-GF40<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.3 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.6 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	15900 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	130 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1 %	ISO 527-1/-2
Flexural modulus	15800 MPa	ISO 178
Flexural strength	200 MPa	ISO 178
Compressive strength	195 MPa	ISO 604
Compressive stress at 1% strain	130 MPa	ISO 604
Izod notched impact strength, 23°C	8 kJ/m ²	ISO 180/1A
Poisson's ratio	0.33 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	328 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	263 °C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	239 °C	ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	12 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	82 E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	V-0 class	IEC 60695-11-10
Thickness tested	0.25 mm	IEC 60695-11-10

Electrical properties

Surface resistivity	1E17 Ohm	IEC 62631-3-2
Electric strength	33 kV/mm	IEC 60243-1

Physical/Other properties

Density	1670 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	335 °C
Max. melt temperature	345 °C
Screw tangential speed	0.2 - 0.3 m/s
Mold Temperature Optimum	100 °C
Min. mould temperature	80 °C
Max. mould temperature	140 °C
Back pressure	3 MPa

Characteristics

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

Additional information

Processing Notes

Pre-Drying

LCP should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be $\leq -40^{\circ}\text{C}$. The time between drying and processing should be as short as possible.

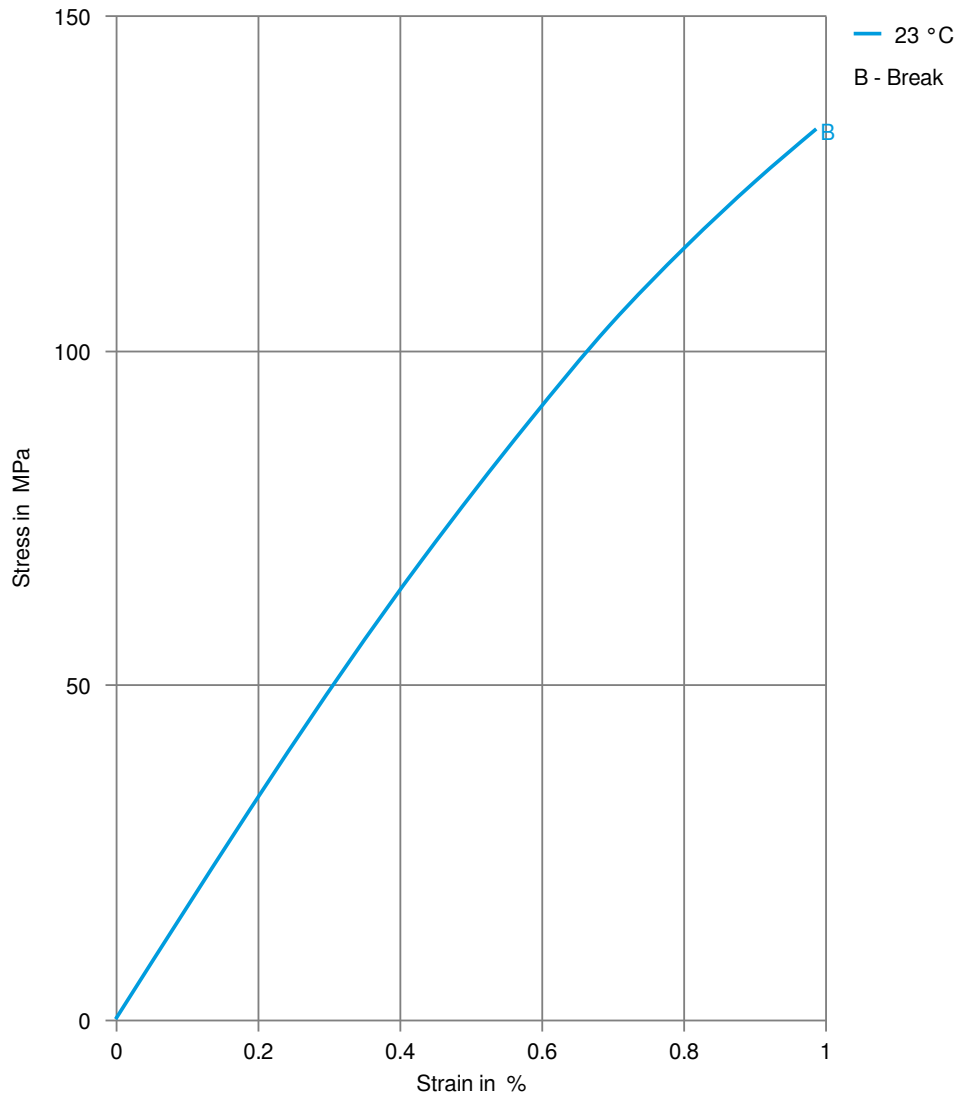
Storage

For subsequent storage of the material in the dryer until processed the temperature does not need to be lowered for grades A, B, C, D and V (≤ 24 h).

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Stress-strain



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Secant modulus-strain

