

# ZENITE® 5115L

## Liquid Crystal Polymer

Zenite® 5115L is a 15% glass fiber reinforced liquid crystal polymer for injection molding with improved toughness.

### Product information

Resin Identification	LCP-GF15	ISO 1043
Part Marking Code	>LCP-GF15<	ISO 11469

### Rheological properties

Moulding shrinkage, parallel	0.2 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.9 %	ISO 294-4, 2577

### Typical mechanical properties

Tensile modulus	11500 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	175 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3 %	ISO 527-1/-2
Flexural modulus	10500 MPa	ISO 178
Flexural strength	170 MPa	ISO 178
Poisson's ratio	0.33 <sup>[C]</sup>	

[C]: Calculated

### Thermal properties

Melting temperature, 10°C/min	319 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	275 °C	ISO 75-1/-2

### Flammability

Burning Behav. at thickness h	V-0 class	IEC 60695-11-10
Thickness tested	0.8 mm	IEC 60695-11-10
UL recognition	yes	UL 94

### Electrical properties

Relative permittivity, 1000Hz	3.52 <sup>[OT]</sup>	IEC 62631-2-1
Relative permittivity, 1MHz	3.29 <sup>[OT]</sup>	IEC 62631-2-1
Dissipation factor, 1000Hz	0 <sup>[OT]</sup> E-4	IEC 62631-2-1
Dissipation factor, 1MHz	24 <sup>[OT]</sup> E-4	IEC 62631-2-1
Dissipation factor, 1GHz	38 <sup>[OT, 1]</sup> E-4	IEC 61189-2-721
Relative permittivity, printed circuits and boards, 2.5 GHz	3.7 <sup>[OT, 2]</sup>	IEC 61189-2-721
Dissipation factor, printed circuits and boards, 2.5 GHz	40 <sup>[OT, 2]</sup> E-4	IEC 61189-2-721

[OT]: One time tested

[1]: Service Request Case No.: 00073539

[2]: Shifted data from 1.9GHz to 2.5GHz for harmonization purpose, only use 'whole' numbers

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## Physical/Other properties

Density	1500 kg/m <sup>3</sup>	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	335 °C
Min. melt temperature	325 °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	120 °C
Back pressure	3 MPa
Ejection temperature	245 °C

## Characteristics

Processing

Injection Moulding

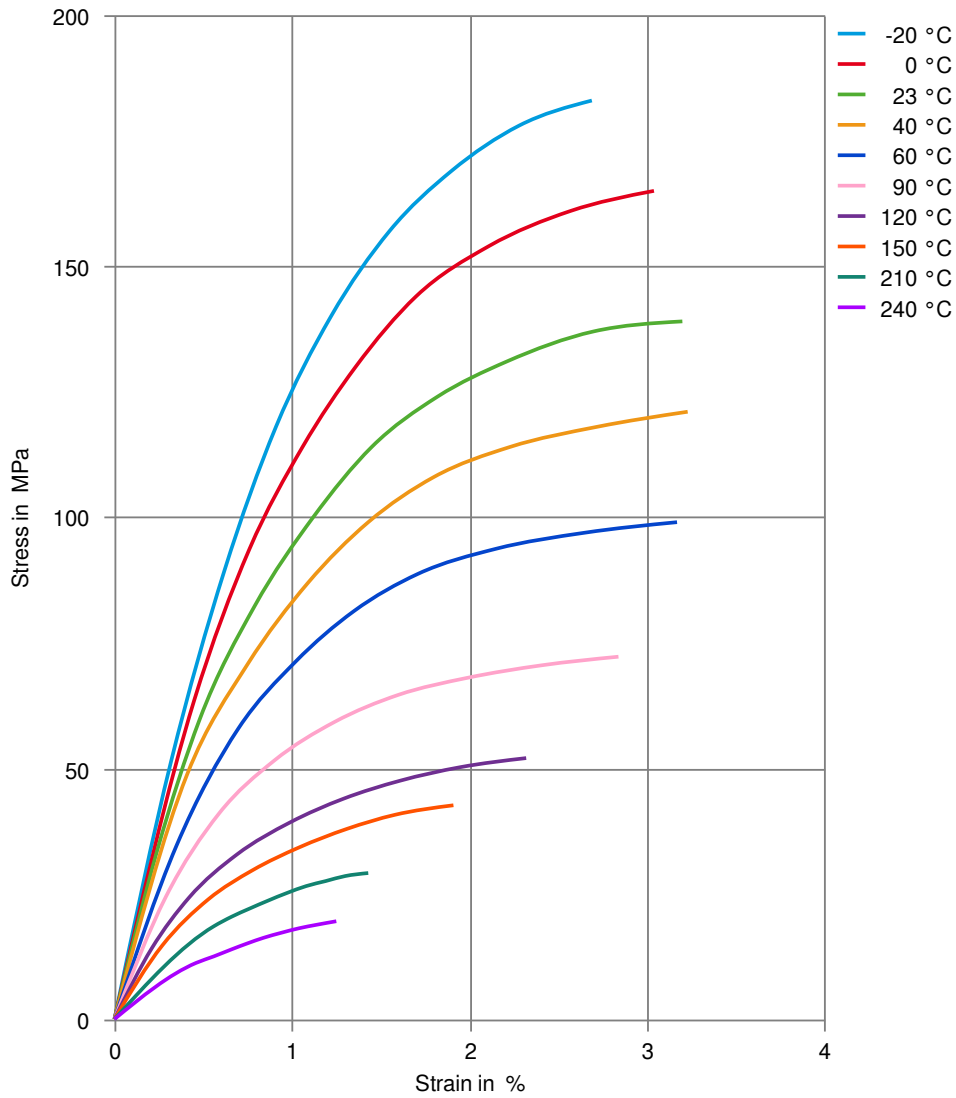
Special characteristics

Flame retardant, High impact or impact modified, Heat stabilised or stable to heat, High Flow, Lead-free soldering resistant

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## Stress-strain



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## Secant modulus-strain

