# 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)-GF40 | ISO 1043 |
| Part Marking Code | >(LCP+PPS)-GF40< | ISO 11469 |

## Rheological properties

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

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile modulus | 2.31E6 | psi | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 18900 | psi | ISO 527-1/-2 |
| Tensile strain at break, 5mm/min | 1 | % | ISO 527-1/-2 |
| Flexural modulus | 2.29E6 | psi | ISO 178 |
| Flexural strength | 29000 | psi | ISO 178 |
| Compressive strength | 28300 | psi | ISO 604 |
| Compressive stress at 1% strain | 18900 | psi | ISO 604 |
| Izod notched impact strength, 23°C | 3.81 | ftlb/in² | ISO 180/1A |

## Thermal properties

| | | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 622 | °F | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 505 | °F | ISO 75-1/-2 |
| Vicat softening temperature, 50°C/h 50N | 462 | °F | ISO 306 |
| Coefficient of linear thermal expansion (CLTE), parallel | 0.07 | E-4/°F | ISO 11359-1/-2 |
| Coefficient of linear thermal expansion (CLTE), normal | 0.456 | E-4/°F | ISO 11359-1/-2 |

## Flammability

| | | | |
|---|---|---|---|
| Burning Behav. at thickness h | V-0 | class | IEC 60695-11-10 |
| Thickness tested | 0.0098 | in | IEC 60695-11-10 |

## Electrical properties

| | | | |
|---|---|---|---|
| Relative permittivity, 1GHz | 4.53[OT, 1] | | IEC 61189-2-721 |
| Relative permittivity, 2GHz | 4.54[OT, 2] | | IEC 61189-2-721 |
| Dissipation factor, 1GHz | 228[OT, 1] | E-4 | IEC 61189-2-721 |
| Dissipation factor, 2GHz | 240[OT, 2] | E-4 | IEC 61189-2-721 |
| Surface resistivity | 1E17 | Ohm | IEC 62631-3-2 |
| Electric strength | 838 | kV/in | IEC 60243-1 |

[OT]: One time tested

[1]: Black color

[2]: Black color, tested at 1.9GHz

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## Physical/Other properties

| | | | |
|---|---|---|---|
| Density | 0.0603 | lb/in³ | ISO 1183 |

## Injection

| | | |
|---|---|---|
| Drying Recommended | yes | |
| Drying Temperature | 302 | °F |
| Drying Time, Dehumidified Dryer | 4 - 6 | h |
| Processing Moisture Content | ≤0.01 | % |
| Melt Temperature Optimum | 644 | °F |
| Min. melt temperature | 635 | °F |
| Max. melt temperature | 653 | °F |
| Max. screw tangential speed | 0.2 - 0.3 | m/s |
| Mold Temperature Optimum | 212 | °F |
| Min. mold temperature | 176 | °F |
| Max. mold temperature | 284 | °F |
| Back pressure | 435 | psi |

## Characteristics

| | |
|---|---|
| Processing | Injection Molding |
| Special characteristics | Flame retardant, Heat stabilized 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 =< - 40° C. The time between drying and processing should be as short as possible.

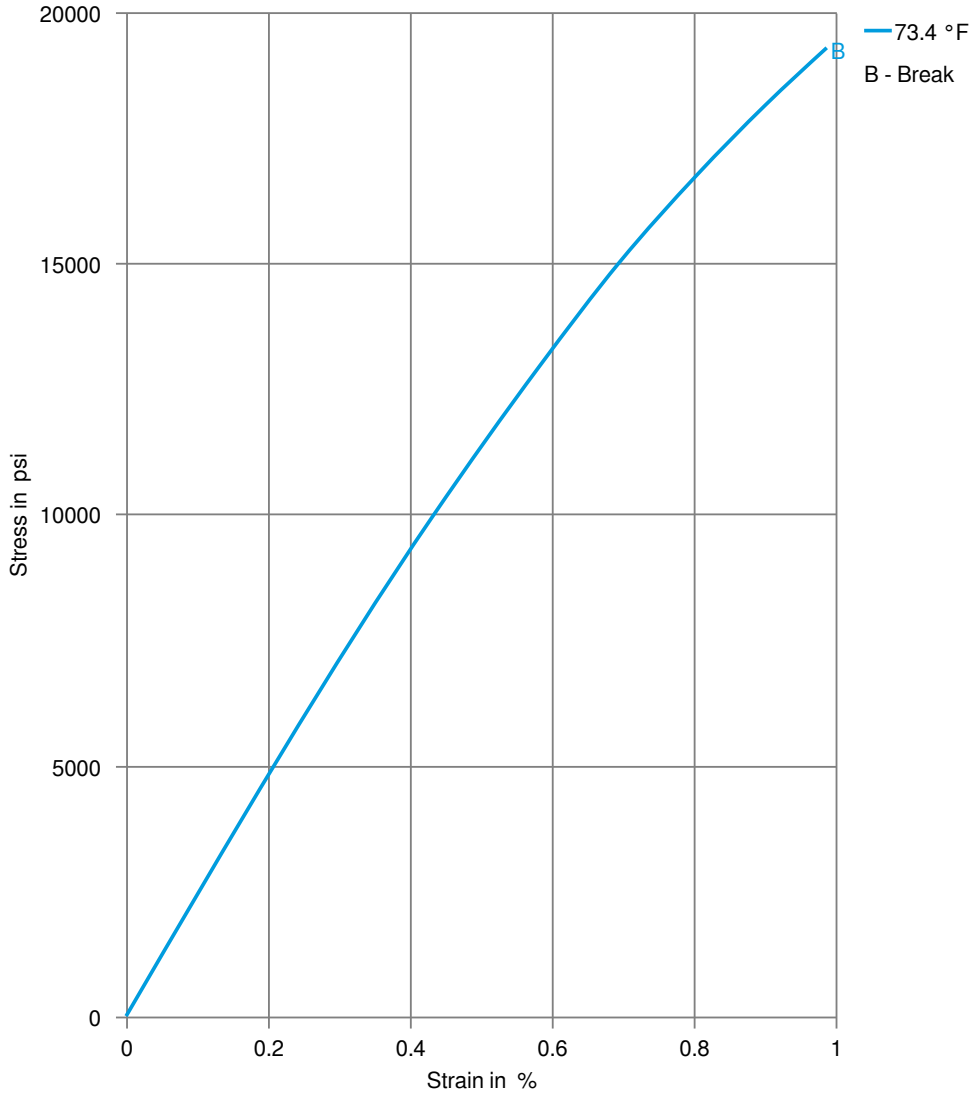
### Storage

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



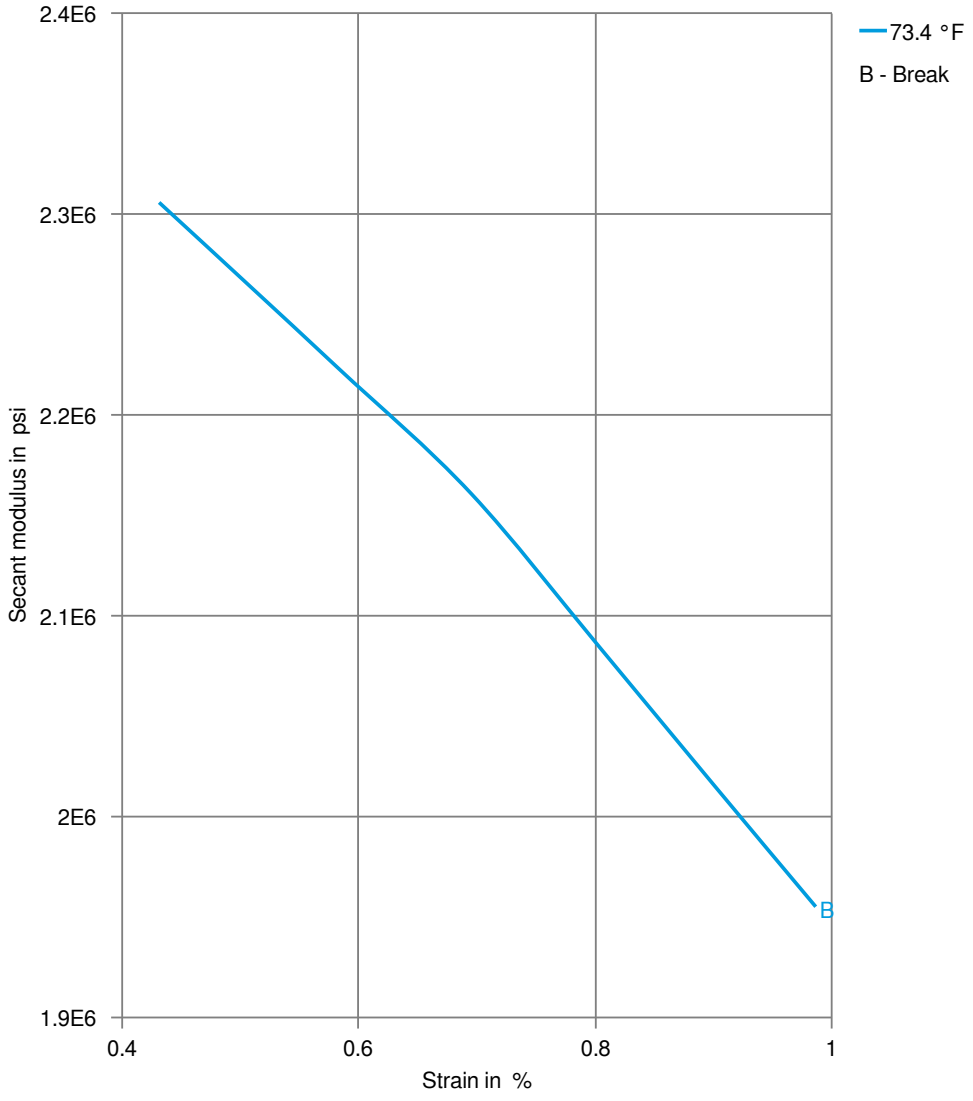



Revised: 2025-10-13 Source: Celanese Materials Database

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## Secant modulus-strain






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