# ZENITE® SEA20N

## Liquid Crystal Polymer

ZENITE® SEA20N is a 40% mineral filled grade. It offers excellent surface appearance, low warpage, and excellent dimensional stability. Application for this grade is compact camera module, and other thin, small electronic parts

## Product information

| | | |
|---|---|---|
| Resin Identification | LCP-MD40 | ISO 1043 |
| Part Marking Code | >LCP-MD40< | ISO 11469 |

## Rheological properties

| | | | |
|---|---|---|---|
| Molding shrinkage, parallel | 0.2 | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 0.8 | % | ISO 294-4, 2577 |

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile modulus | 1.23E6 | psi | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 14500 | psi | ISO 527-1/-2 |
| Tensile strain at break, 5mm/min | 4.2 | % | ISO 527-1/-2 |
| Flexural modulus | 1.26E6 | psi | ISO 178 |
| Flexural strength | 18100 | psi | ISO 178 |
| Charpy notched impact strength, 23°C | 2.38 | ftlb/in$^2$ | ISO 179/1eA |

## Thermal properties

| | | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 626 | °F | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 428 | °F | ISO 75-1/-2 |
| Thermal conductivity, flow | 1.51 | W/(m K) | ISO 22007-2 |
| Thermal conductivity, crossflow | 0.77 | W/(m K) | ISO 22007-2 |
| Thermal conductivity, through plane | 0.54 | W/(m K) | ISO 22007-2 |
| Effective thermal diffusivity, flow | 0.000001 | m$^2$/s | ISO 22007-4 |
| Effective thermal diffusivity, crossflow | 3.8E-7 | m$^2$/s | ISO 22007-4 |
| Effective thermal diffusivity, through plane | 2.7E-7 | m$^2$/s | ISO 22007-4 |
| Specific heat capacity of melt | 1.16 | J/(kg K) | ISO 22007-4 |

## Physical/Other properties

| | | | |
|---|---|---|---|
| Density | 0.0639 | lb/in$^3$ | 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 | 635 | °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 |

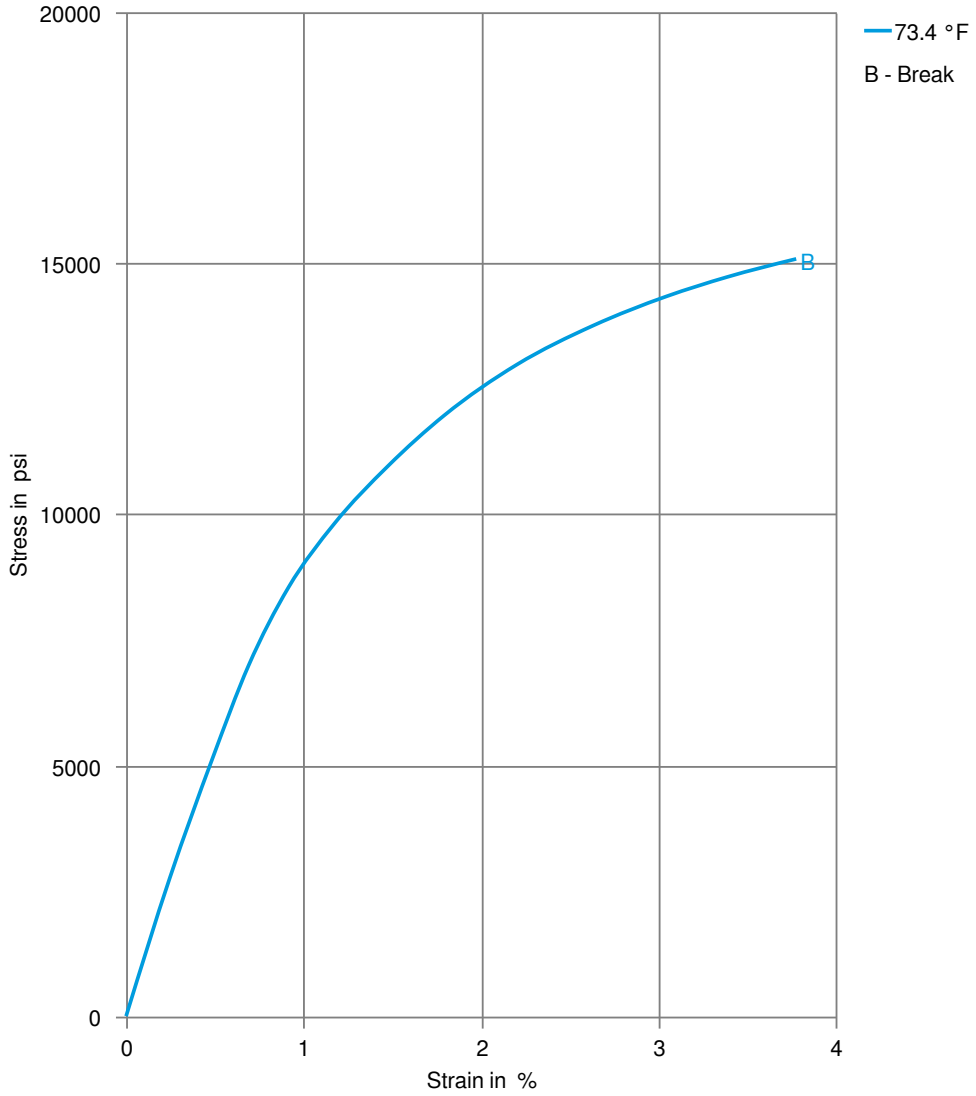
# ZENITE® SEA20N

Liquid Crystal Polymer

## Characteristics

| | |
|---|---|
| Processing | Injection Molding |
| Special characteristics | Flame retardant, Heat stabilized or stable to heat, High Gloss, Specialty appearance, Low wear / Low friction, High Flow, Low Warpage, Lead-free soldering resistant |

## Stress-strain



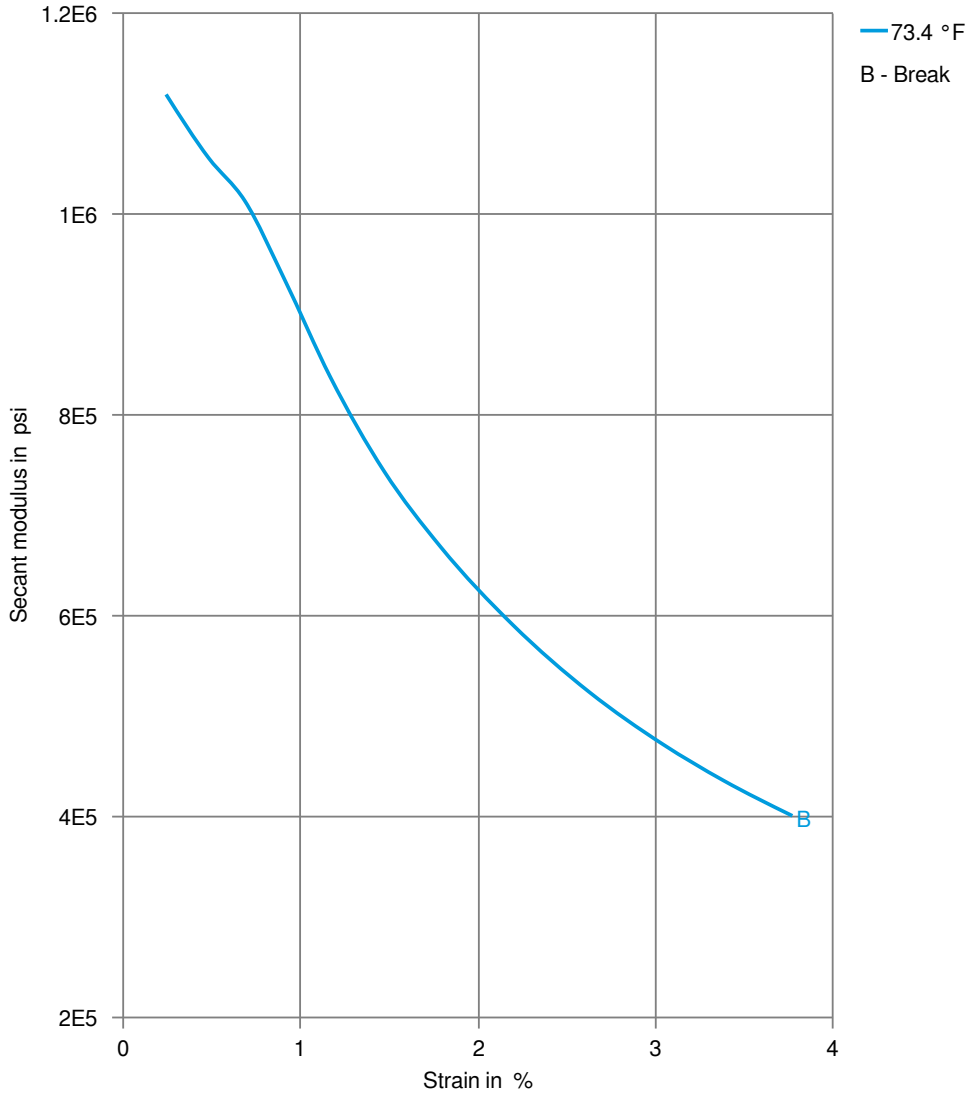



Revised: 2025-03-20 Source: Celanese Materials Database

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## Liquid Crystal Polymer

### Secant modulus-strain






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