

ZENITE® 5244L

Liquid Crystal Polymer

Zenite 5244L is a 40% glass/mineral reinforced LCP resin with improved toughness.

Product information

| | | |
|----------------------|-------------------|-----------|
| Resin Identification | LCP-(GF+MD)4 0 | ISO 1043 |
| Part Marking Code | >LCP-(GF+MD)40< | ISO 11469 |

Rheological properties

| | | |
|------------------------------|-------|-----------------|
| Moulding shrinkage, parallel | 0.1 % | ISO 294-4, 2577 |
| Moulding shrinkage, normal | 0.4 % | ISO 294-4, 2577 |

Typical mechanical properties

| | | |
|--------------------------------------|------------------------|--------------|
| Tensile modulus | 14000 MPa | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 131 MPa | ISO 527-1/-2 |
| Tensile strain at break, 5mm/min | 1.7 % | ISO 527-1/-2 |
| Flexural modulus | 13100 MPa | ISO 178 |
| Flexural strength | 200 MPa | ISO 178 |
| Charpy impact strength, 23°C | 27 kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 16.6 kJ/m ² | ISO 179/1eA |
| Izod impact strength, 23°C | 28 kJ/m ² | ISO 180/1U |
| Poisson's ratio | 0.33 ^[C] | |

[C]: Calculated

Thermal properties

| | | |
|--|----------|----------------|
| Melting temperature, 10°C/min | 318 °C | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 285 °C | ISO 75-1/-2 |
| Coefficient of linear thermal expansion (CLTE), parallel | 6 E-6/K | ISO 11359-1/-2 |
| Coefficient of linear thermal expansion (CLTE), normal | 48 E-6/K | ISO 11359-1/-2 |

Flammability

| | | |
|--------------------------------------|-----------|-----------------|
| Burning Behav. at 1.5mm nom. thickn. | V-0 class | IEC 60695-11-10 |
| Thickness tested | 1.5 mm | IEC 60695-11-10 |
| 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 |

Physical/Other properties

| | | |
|---------|------------------------|----------|
| Density | 1710 kg/m ³ | ISO 1183 |
|---------|------------------------|----------|

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 |

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| | |
|--------------------------|---------------|
| Min. melt temperature | 325 °C |
| Max. melt temperature | 350 °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 | 285 °C |

Characteristics

Processing

Injection Moulding

Special characteristics

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