

ZENITE® ZE55205 - LCP

Description

Zenite® ZE55205 is a black reinforced LCP resin with a high dielectric constant.

| Physical properties | Value | Unit | Test Standard |
|-----------------------------|-------|--------------------|-----------------|
| Density | 118 | lb/ft ³ | ISO 1183 |
| Molding shrinkage, parallel | 0.1 | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 0.6 | % | ISO 294-4, 2577 |

| Mechanical properties | Value | Unit | Test Standard |
|--------------------------------------|--------|-----------------------|---------------|
| Tensile modulus | 2.07E6 | psi | ISO 527-2/1A |
| Tensile stress at break, 5mm/min | 18100 | psi | ISO 527-2/1A |
| Tensile strain at break, 5mm/min | 2.5 | % | ISO 527-2/1A |
| Flexural modulus, 23°C | 1.76E6 | psi | ISO 178 |
| Flexural strength, 23°C | 27600 | psi | ISO 178 |
| Charpy impact strength, 23°C | 17.1 | ft-lb/in ² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 14.3 | ft-lb/in ² | ISO 179/1eA |
| Izod impact notched, 23°C | 13.8 | ft-lb/in ² | ISO 180/1A |
| Izod impact unnotched, 23°C | 16.6 | ft-lb/in ² | ISO 180/1U |

| Thermal properties | Value | Unit | Test Standard |
|--------------------|-------|------|---------------|
| DTUL at 1.8 MPa | 529 | °F | ISO 75-1, -2 |

| Electrical properties | Value | Unit | Test Standard |
|-----------------------------|-------|------|---------------|
| Relative permittivity, 1MHz | 4.52 | - | IEC 60250 |
| Dissipation factor, 1MHz | 190 | E-4 | IEC 60250 |

Typical injection moulding processing conditions

| Pre Drying | Value | Unit | Test Standard |
|---|------------|------|---------------|
| Necessary low maximum residual moisture content | 0.01 | % | - |
| Drying time | 5 | h | - |
| Drying temperature | ≥302 | °F | - |
| Temperature | Value | Unit | Test Standard |
| Hopper temperature | 68 - 86 | °F | - |
| Feeding zone temperature | 104 - 140 | °F | - |
| Zone1 temperature | 608 - 626 | °F | - |
| Zone2 temperature | 635 - 653 | °F | - |
| Zone3 temperature | 635 - 653 | °F | - |
| Zone4 temperature | 635 - 653 | °F | - |
| Nozzle temperature | 635 - 653 | °F | - |
| Melt temperature | 626 - 662 | °F | - |
| Mold temperature | 176 - 248 | °F | - |
| Pressure | Value | Unit | Test Standard |
| Injection pressure | 500 - 1500 | bar | - |
| Hold pressure | 500 - 1500 | bar | - |
| Back pressure max. | 30 | bar | - |