

## 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 <sup>3</sup> | 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 <sup>2</sup> | ISO 179/1eU   |
| Charpy notched impact strength, 23°C | 14.3   | ft-lb/in <sup>2</sup> | ISO 179/1eA   |
| Izod impact notched, 23°C            | 13.8   | ft-lb/in <sup>2</sup> | ISO 180/1A    |
| Izod impact unnotched, 23°C          | 16.6   | ft-lb/in <sup>2</sup> | 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  | -             |