

# Zenite® ZE55205

Liquid Crystal Polymer  
Celanese Corporation

Message:

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

| General Information                               |                      |                   |                 |
|---------------------------------------------------|----------------------|-------------------|-----------------|
| UL YellowCard                                     | E344082-100831306    |                   |                 |
| RoHS Compliance                                   | Contact manufacturer |                   |                 |
| Appearance                                        | Black                |                   |                 |
| Physical                                          | Nominal Value        | Unit              | Test Method     |
| Density                                           | 1.89                 | g/cm <sup>3</sup> | ISO 1183        |
| Molding Shrinkage                                 |                      |                   | ISO 294-4       |
| Vertical flow direction                           | 0.60                 | %                 | ISO 294-4       |
| Flow direction                                    | 0.10                 | %                 | ISO 294-4       |
| Mechanical                                        | Nominal Value        | Unit              | Test Method     |
| Tensile Modulus                                   | 14300                | MPa               | ISO 527-2/1A/1  |
| Tensile Stress (Break)                            | 125                  | MPa               | ISO 527-2/1A/5  |
| Tensile Strain (Break)                            | 2.5                  | %                 | ISO 527-2/1A/5  |
| Flexural Modulus (23°C)                           | 12200                | MPa               | ISO 178         |
| Flexural Stress (23°C)                            | 190                  | MPa               | ISO 178         |
| Impact                                            | Nominal Value        | Unit              | Test Method     |
| Charpy Notched Impact Strength (23°C)             | 30                   | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Charpy Unnotched Impact Strength (23°C)           | 36                   | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Notched Izod Impact (23°C)                        | 29                   | kJ/m <sup>2</sup> | ISO 180/1A      |
| Unnotched Izod Impact Strength (23°C)             | 35                   | kJ/m <sup>2</sup> | ISO 180/1U      |
| Thermal                                           | Nominal Value        | Unit              | Test Method     |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 276                  | °C                | ISO 75-2/A      |
| Electrical                                        | Nominal Value        |                   | Test Method     |
| Relative Permittivity                             |                      |                   |                 |
| 1 MHz                                             | 4.52                 |                   | IEC 60250       |
| 2.05 GHz                                          | 6.07                 |                   | Internal method |
| Dissipation Factor                                |                      |                   |                 |
| 1 MHz                                             | 0.019                |                   | IEC 60250       |
| 2.05 GHz                                          | 4.0E-3               |                   | Internal method |
| Injection                                         | Nominal Value        | Unit              |                 |
| Drying Temperature                                | 150                  | °C                |                 |
| Drying Time                                       | 5.0                  | hr                |                 |
| Suggested Max Moisture                            | 0.010                | %                 |                 |

|                        |             |     |
|------------------------|-------------|-----|
| Hopper Temperature     | 20.0 - 30.0 | °C  |
| Rear Temperature       | 320 - 330   | °C  |
| Middle Temperature     | 335 - 345   | °C  |
| Front Temperature      | 335 - 345   | °C  |
| Nozzle Temperature     | 335 - 345   | °C  |
| Processing (Melt) Temp | 330 - 350   | °C  |
| Mold Temperature       | 80.0 - 120  | °C  |
| Injection Pressure     | 50.0 - 150  | MPa |
| Holding Pressure       | 50.0 - 150  | MPa |
| Back Pressure          | 0.00 - 3.00 | MPa |

Injection instructions

Feed Temperature: 40 to 60°CZone 4 Temperature: 335 to 345°C

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