ZENITE® 450LDS

Liquid Crystal Polymer

Product information

Resin Identification	LCP-MD27	ISO 1043
Part Marking Code	>LCP-MD27<	ISO 11469

Rheological properties

Molding shrinkage, parallel	0 %	ISO 294-4, 2577
Molding shrinkage, normal	0.7 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	2.47E6 psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	23400 psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	3.7 %	ISO 527-1/-2
Flexural modulus	2.18E6 psi	ISO 178
Flexural strength	28400 psi	ISO 178
Charpy impact strength, 23°C	20.5 ftlb/in²	ISO 179/1eU

Thermal properties

Temperature of deflection under load, 1.8 MPa	433 °F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	491 °F	ISO 75-1/-2
Thermal conductivity, flow	2 W/(m K)	ISO 22007-2
Specific heat capacity of melt	1330 J/(kg K)	ISO 22007-4

Electrical properties

Relative permittivity, 1GHz	4	IEC 61189-2-721
Dissipation factor, 2GHz	30 E-4	IEC 61189-2-721

Physical/Other properties

Humidity absorption, 2mm	0.012 %	Sim. to ISO 62
Density	0.0606 lb/in³	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	644 °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	248 °F
Ejection temperature	520 °F

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

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Characteristics

Processing	Injection Molding
Special characteristics	Flame retardant, Heat stabilized or stable to heat, Specialty appearance, Low Warpage, Laser Direct Structurable

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