ZENITE® 650

Liquid Crystal Polymer

Zenite® 650 is designed for high dielectric constant and low dissipation factor

Product information

Resin Identification	LCP-(GF+MD)55		ISO 1043
Part Marking Code	>LCP-(GF+MD)55<		ISO 11469

Rheological properties

Molding shrinkage, parallel	0	%	ISO 294-4, 2577
Molding shrinkage, normal	0.6	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	2.61E6	psi	ISO 527-1/-2
Tensile stress at break, 50mm/min	20700	psi	ISO 527-1/-2
Tensile strain at break, 50mm/min	1.5	%	ISO 527-1/-2
Flexural modulus	2.32E6	psi	ISO 178
Flexural strength	28600	psi	ISO 178
Charpy impact strength, 23°C	11.4	ftlb/in²	ISO 179/1eU

Thermal properties

Temperature of deflection under load, 1.8 MPa	532	°F	ISO 75-1/-2

Electrical properties

Relative permittivity, 2GHz	12		IEC 61189-2-721
Dissipation factor, 2GHz	80	E-4	IEC 61189-2-721
Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	1E14	Ohm	IEC 62631-3-2
Electric strength	610	kV/in	IEC 60243-1

Physical/Other properties

Density	0.0729	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	532	°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, High Flow, Low Warpage, Lead-free soldering resistant

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