Celanese
The chemistry inside innovation™

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

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

Typical mechanical properties

Tensile modulus	18000	MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	140	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	1.5	%	ISO 527-1/-2
Flexural modulus	16000	MPa	ISO 178
Flexural strength	200	MPa	ISO 178
Charpy impact strength, 23 °C	24	kJ/m²	ISO 179/1eU
Poisson's ratio	0.33[C]		

[C]: Calculated

Thermal properties

Temperature of deflection under load, 1.8 MPa	278	°C	ISO 75-1/-2

Electrical properties

Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	1E14	Ohm	IEC 62631-3-2
Electric strength	24	kV/mm	IEC 60243-1
Relative permittivity, printed circuits and boards, 2.5 GHz	12		IEC 61189-2-721
Dissipation factor, printed circuits and boards, 2.5 GHz	80	E-4	IEC 61189-2-721

Physical/Other properties

Density	2020	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	150	°C
Drying Time, Dehumidified Dryer	4 - 6	h
Processing Moisture Content	≤0.01	%
Melt Temperature Optimum	340	°C
Min. melt temperature	335	°C
Max. melt temperature	345	°C
Screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	100	°C
Min. mould temperature	80	°C

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Max. mould temperature	120	°C
Ejection temperature	278	°C

Characteristics

Processing	Injection Moulding
Special characteristics	Flame retardant, Heat stabilised or stable to heat, Specialty appearance, High Flow, Low Warpage, Lead-free soldering resistant