

VECTRA® A240

Liquid Crystal Polymer

40% carbon fiber reinforced grade with excellent electrical conductivity and exceptional stiffness.

Product information

Resin Identification	LCP-CF40	ISO 1043
Part Marking Code	>LCP-CF40<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.1 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	35000 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	185 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	0.7 %	ISO 527-1/-2
Flexural modulus	35000 MPa	ISO 178
Flexural strength	300 MPa	ISO 178
Charpy impact strength, 23 °C	15 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23 °C	11 kJ/m ²	ISO 179/1eA
Hardness, Rockwell, M-scale	83	ISO 2039-2
Poisson's ratio	0.33 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10 °C/min	280 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	233 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	1 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	6 E-6/K	ISO 11359-1/-2

Electrical properties

Volume resistivity	4 Ohm.m	IEC 62631-3-1
Surface resistivity	590 Ohm	IEC 62631-3-2

Physical/Other properties

Humidity absorption, 2mm	0.06 %	Sim. to ISO 62
Density	1520 kg/m ³	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	290 °C
Min. melt temperature	280 °C
Max. melt temperature	315 °C

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Screw tangential speed	0.2 - 0.3 m/s
Mold Temperature Optimum	100 °C
Min. mould temperature	80 °C
Max. mould temperature	120 °C
Hold pressure range	50 - 150 MPa
Back pressure	3 MPa
Ejection temperature	228 °C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Increased electrical conductivity, Static dissipative, Flame retardant