Celanese
The chemistry inside innovation™

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/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	11	kJ/m²	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/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	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