

VECTRA® E830IPD

Liquid Crystal Polymer

30% glass filled Platable grade. Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant.

Product information

Resin Identification	LCP-GF30	ISO 1043
Part Marking Code	>LCP-GF30<	ISO 11469

Typical mechanical properties

Tensile modulus	15000 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	140 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.7 %	ISO 527-1/-2
Flexural modulus	14000 MPa	ISO 178
Flexural strength	200 MPa	ISO 178
Charpy notched impact strength, 23°C	30 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	20 kJ/m ²	ISO 180/1A
Poisson's ratio	0.33 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	330 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	245 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	4.2 ^[1] E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	59 ^[1] E-6/K	ISO 11359-1/-2

[1]: Temperature range: -40°C to 120°C

Physical/Other properties

Density	1600 kg/m ³	ISO 1183
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Injection

Drying Recommended	yes
Drying Temperature	170 °C
Drying Time, Dehumidified Dryer	4 - 6 h
Processing Moisture Content	≤0.01 %
Melt Temperature Optimum	345 °C
Min. melt temperature	340 °C
Max. melt temperature	350 °C
Screw tangential speed	0.2 - 0.3 m/s
Mold Temperature Optimum	100 °C
Min. mould temperature	80 °C
Max. mould temperature	120 °C

Characteristics

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

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Additional information

Processing Notes

Pre-Drying

VECTRA should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be $\leq -40^{\circ}\text{C}$. The time between drying and processing should be as short as possible.
