

VECTRA® E130G

Liquid Crystal Polymer

30% glass fiber filled / low injection pressure

Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant UL-Listing V-0 in natural and black at 0.75mm thickness per UL 94 flame testing. Relative-Temperature-Index (RTI) according to UL 746B: electricals 130°C, mechanicals 130°C. UL = Underwriters Laboratories (USA)

Product information

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

Typical mechanical properties

Tensile modulus	13000 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	150 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3 %	ISO 527-1/-2
Flexural modulus	13000 MPa	ISO 178
Flexural strength	170 MPa	ISO 178
Charpy notched impact strength, -30 °C	46 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23 °C	30 kJ/m ²	ISO 180/1A
Poisson's ratio	0.33 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10 °C/min	335 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	245 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	273 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	5 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	67 E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	V-0 class	IEC 60695-11-10
Thickness tested	0.75 mm	IEC 60695-11-10

Electrical properties

Volume resistivity	>1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	1E14 Ohm	IEC 62631-3-2

Physical/Other properties

Density	1610 kg/m ³	ISO 1183
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Injection

Drying Recommended	yes
Drying Temperature	150 °C
Drying Time, Dehumidified Dryer	4 - 6 h
Processing Moisture Content	≤0.01 %
Melt Temperature Optimum	345 °C
Min. melt temperature	335 °C

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Max. melt temperature	355 °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, Heat stabilised or stable to heat, High Flow, Lead-free soldering resistant

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.
