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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	1.89E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	21800	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	3	%	ISO 527-1/-2
Flexural modulus	1.89E6	psi	ISO 178
Flexural strength	24700	psi	ISO 178
Charpy notched impact strength, -30°C	21.9	ftlb/in²	ISO 179/1eA
Izod notched impact strength, 23°C	14.3	ftlb/in²	ISO 180/1A

Thermal properties

Melting temperature, 10°C/min	635	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	473	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	523	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.03	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.372	E-4/°F	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.0295	in	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	0.0581	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	302	°F
Drying Time, Dehumidified Dryer	4 - 6	h
Processing Moisture Content	≤0.01	%
Melt Temperature Optimum	653	°F
Min. melt temperature	635	°F
Max. melt temperature	671	°F
Max. screw tangential speed	0.2 - 0.3	m/s

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Mold Temperature Optimum	212	°F
Min. mold temperature	176	°F
Max. mold temperature	248	°F

Characteristics

Processing	Injection Molding
Special characteristics	Flame retardant, Heat stabilized 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 =< - 40° C. The time between drying and processing should be as short as possible.

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