

VECTRA® E473I

Liquid Crystal Polymer

Vectra E473i is a low warp LCP with easy flow and high temperature capability. 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-(GF+MD)3 3	ISO 1043
Part Marking Code	>LCP-(GF+MD)33<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.1 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.5 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	11000 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	125 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.2 %	ISO 527-1/-2
Flexural modulus	12000 MPa	ISO 178
Flexural strength	170 MPa	ISO 178
Compressive stress at 1% strain	59 MPa	ISO 604
Charpy impact strength, 23°C	33 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	13 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	13 kJ/m ²	ISO 180/1A
Izod impact strength, 23°C	30 kJ/m ²	ISO 180/1U
Hardness, Rockwell, M-scale	40	ISO 2039-2
Poisson's ratio	0.34 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	335 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	250 °C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	159 °C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	190 °C	ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	6 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	11 E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0 class	IEC 60695-11-10
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Electrical properties

Relative permittivity, 1MHz	4	IEC 62631-2-1
Dissipation factor, 1MHz	340 E-4	IEC 62631-2-1
Volume resistivity	1E14 Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15 Ohm	IEC 62631-3-2
Electric strength	49 kV/mm	IEC 60243-1

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Comparative tracking index	175	IEC 60112
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Physical/Other properties

Density	1630 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	355 °C
Min. melt temperature	335 °C
Max. melt temperature	370 °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
Ejection temperature	314 °C

Characteristics

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

Automotive

OEM	ADDITIONAL INFORMATION
VW Group	No spec listed (Natural)