

VECTRA® E5311

Liquid Crystal Polymer

Mineral filled grade with low warp, easy flow and smooth surface appearance.
 Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant

Product information

Resin Identification	LCP-MD30	ISO 1043
Part Marking Code	>LCP-MD30<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.5 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	10000 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	120 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3.5 %	ISO 527-1/-2
Flexural modulus	10000 MPa	ISO 178
Flexural strength	130 MPa	ISO 178
Charpy notched impact strength, 23°C	8 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	8 kJ/m ²	ISO 180/1A
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	225 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	267 °C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	197 °C	ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	7 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	38 E-6/K	ISO 11359-1/-2

Electrical properties

Volume resistivity	1E14 Ohm.m	IEC 62631-3-1
Surface resistivity	1E15 Ohm	IEC 62631-3-2

Physical/Other properties

Density	1650 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	340 °C
Min. melt temperature	335 °C
Max. melt temperature	345 °C

VECTRA® E531I

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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
Back pressure	3 MPa
Ejection temperature	245 °C

Characteristics

Processing	Injection Moulding
Additives	Mineral Filler
Special characteristics	Flame retardant, Heat stabilised or stable to heat, Specialty appearance, High Flow, Low Warp

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.

Storage

For subsequent storage of the material in the dryer until processed the temperature does not need to be lowered for grades A, B, C, D and V (≤ 24 h).

Automotive

OEM

BMW

Mercedes-Benz

ADDITIONAL INFORMATION

No Spec, Special Part Approval, See Your CE Account Manager.

Lighting Bezels, No Spec, Special Part Approval, See Your CE Account Manager.