

# VECTRA® E531I

## 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 <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, 23°C	8 kJ/m <sup>2</sup>	ISO 180/1A
Poisson's ratio	0.34 <sup>[C]</sup>	

[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 <sup>3</sup>	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® E5311

## Liquid Crystal Polymer

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 Warpage

## 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 ( $\leq 24\text{ h}$ ).

## 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.