Celanese
The chemistry inside innovation™

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

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

Typical mechanical properties

Tensile modulus	1.45E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	17400	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	3.5	%	ISO 527-1/-2
Flexural modulus	1.45E6	psi	ISO 178
Flexural strength	18900	psi	ISO 178
Charpy notched impact strength, 23°C	3.81	ftlb/in²	ISO 179/1eA
Izod notched impact strength, 23°C	3.81	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	437	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	513	°F	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	387	°F	ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	0.04	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.211	E-4/°F	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	0.0596	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	644	°F
Min. melt temperature	635	°F
Max. melt temperature	653	°F
Max. screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	212	°F

Revised: 2025-03-20 Source: Celanese Materials Database

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Min. mold temperature	176 °F
Max. mold temperature	248 °F
Back pressure	435 psi
Ejection temperature	473 °F

Automotive

OEM	ADDITIONAL INFORMATION
BMW	No Spec, Special Part Approval, See Your CE Account Manager.
Mercedes-Benz	Lighting Bezels, No Spec, Special Part Approval, See Your CE Account Manager.

Characteristics

Processing	Injection Molding
Special characteristics	Flame retardant, Heat stabilized 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 =< - 40° 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).

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