Celanese
The chemistry inside innovation™

VECTRA® E488I

Liquid Crystal Polymer

Ultra low warp

Product information

Resin Identification	LCP-(GF+MD)43		ISO 1043
Part Marking Code	>LCP-(GF+MD)43<		ISO 11469

Rheological properties

Molding shrinkage, parallel	0.1	%	ISO 294-4, 2577
Molding shrinkage, normal	0.4	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	1.89E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	16000	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.5	%	ISO 527-1/-2
Flexural modulus	1.89E6	psi	ISO 178
Flexural strength	23200	psi	ISO 178
Flexural strain at failure	1.8	%	ISO 178
Compressive modulus	1.6E6	psi	ISO 604
Compressive strength	16700	psi	ISO 604
Charpy impact strength, 23°C	13.8	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	3.33	ftlb/in²	ISO 179/1eA
Izod notched impact strength, 23°C	4.28	ftlb/in²	ISO 180/1A
Izod impact strength, 23°C	13.3	ftlb/in²	ISO 180/1U
Hardness, Rockwell, M-scale	54		ISO 2039-2

Thermal properties

Melting temperature, 10°C/min	635	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	500	°F	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	392	°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	0.233	E-4/°F	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.0059	in	IEC 60695-11-10

Electrical properties

Relative permittivity, 1MHz	4.24		IEC 62631-2-1
Dissipation factor, 1MHz	450	E-4	IEC 62631-2-1
Volume resistivity	1E14	Ohm.m	IEC 62631-3-1
Surface resistivity	1E17	Ohm	IEC 62631-3-2
Electric strength	1400	kV/in	IEC 60243-1
Comparative tracking index	175		IEC 60112

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

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Physical/Other properties

Water absorption, 2mm	0.005	%	Sim. to ISO 62
Density	0.0639	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	644	°F
Max. melt temperature	671	°F
Max. screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	212	°F
Min. mold temperature	176	°F
Max. mold temperature	248	°F
Ejection temperature	534	°F

Characteristics

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

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