

VECTRA® E473i | LCP | Mineral / Glass Reinforced

Description

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

FDA compliant

UL-Listing V-0 in natural and black at 0.75mm thickness per UL 94 flame testing.

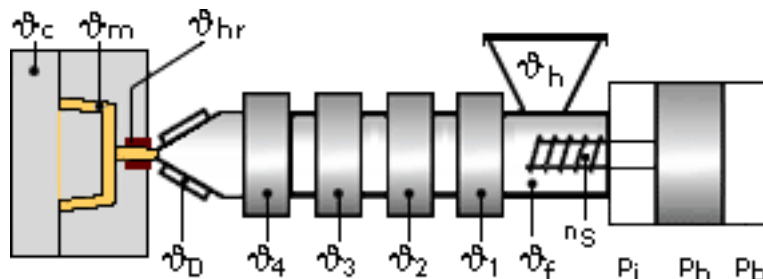
Relative-Temperature-Index (RTI) according to UL 746B: electricals 130°C, mechanicals 130°C.

UL = Underwriters Laboratories (USA)

Physical properties	Value	Unit	Test Standard
Density	1630	kg/m ³	ISO 1183
Mold shrinkage - parallel	-0.07	%	ISO 294-4
Mold shrinkage - normal	0.32	%	ISO 294-4
Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	10900	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	115	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	2.2	%	ISO 527-2/1A
Flexural modulus (23°C)	10900	MPa	ISO 178
Flexural strength (23°C)	150	MPa	ISO 178
Compressive stress @ 1% strain	59	MPa	ISO 604
Charpy impact strength @ 23°C	33.0	kJ/m ²	ISO 179/1eU
Charpy notched impact strength @ 23°C	20.0	kJ/m ²	ISO 179/1eA
Unnotched impact str (Izod) @ 23°C	30	kJ/m ²	ISO 180/1U
Notched impact strength (Izod) @ 23°C	10.0	kJ/m ²	ISO 180/1A
Rockwell hardness	40	M-Scale	ISO 2039-2
Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	335	°C	ISO 11357-1,-2,-3
DTUL @ 1.8 MPa	250	°C	ISO 75-1/-2
DTUL @ 8.0 MPa	159	°C	ISO 75-1/-2
Vicat softening temperature B50 (50°C/h 50N)	190	°C	ISO 306
Coeff.of linear therm. expansion (parallel)	0.06	E-4/°C	ISO 11359-2
Coeff.of linear therm. expansion (normal)	0.11	E-4/°C	ISO 11359-2
Flammability @1.6mm nom. thickn.	V-0	class	UL94
Electrical properties	Value	Unit	Test Standard
Relative permittivity - 1 MHz	4	-	IEC 60250
Dissipation factor - 1 MHz	3400	E-4	IEC 60250
Volume resistivity	1E14	Ohm*m	IEC 60093
Surface resistivity	>1E15	Ohm	IEC 60093
Electric strength	49	kV/mm	IEC 60243-1
Comparative tracking index CTI	175	-	IEC 60112

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Typical injection moulding processing conditions



Pre Drying:

Necessary low maximum residual moisture content: 0.01%

Drying time: 6 h

Drying temperature: 150 - 150 °C

Temperature:

	ϑ_{Mold}	ϑ_{Melt}	$\vartheta_{\text{Nozzle}}$	ϑ_{Zone4}	ϑ_{Zone3}	ϑ_{Zone2}	ϑ_{Zone1}	ϑ_{Feed}	$\vartheta_{\text{Hopper}}$
min (°C)	80	335	335	330	325	320	315	60	60
max (°C)	120	345	345	340	335	330	325	80	80

Pressure:

	Inj press	Hold press
min (bar)	500	500
max (bar)	1500	1500

Speed:

Injection speed: high

Screw speed

Screw diameter (mm)	16	25	40	55	75
Screw speed (RPM)	-	100	120	150	200

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Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use.

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