



Vectra® E473i

Celanese Corporation - Liquid Crystal Polymer

Sunday, November 3, 2019

General Information

Product 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)

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Flame Retardant • Good Flow	• High Heat Resistance • Low Warpage	
Agency Ratings	• FDA Unspecified Rating		
RoHS Compliance	• Contact Manufacturer		
Resin ID (ISO 1043)	• LCP		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.63	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.50	%	
Flow	0.10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.58E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	16700	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.2	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.58E+6	psi	ISO 178
Flexural Stress (73°F)	21800	psi	ISO 178
Compressive Stress (1% Strain)	8560	psi	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	9.5	ft-lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	16	ft-lb/in ²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	4.8	ft-lb/in ²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	14	ft-lb/in ²	ISO 180/1U
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	40		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	482	°F	ISO 75-2/A
Heat Deflection Temperature (1160 psi, Unannealed)	318	°F	ISO 75-2/C
Vicat Softening Temperature	374	°F	ISO 306/B50
Melting Temperature ²	635	°F	ISO 11357-3
CLTE - Flow	3.3E-6	in/in/°F	ISO 11359-2
CLTE - Transverse	6.1E-6	in/in/°F	ISO 11359-2

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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Electric Strength	1200	V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	4.00		IEC 60250
Dissipation Factor (1 MHz)	0.34		IEC 60250
Comparative Tracking Index	175	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	V-0		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	302	°F
Drying Time	6.0	hr
Suggested Max Moisture	0.010	%
Hopper Temperature	140 to 176	°F
Rear Temperature	599 to 617	°F
Middle Temperature	608 to 626	°F
Front Temperature	617 to 635	°F
Nozzle Temperature	635 to 653	°F
Processing (Melt) Temp	635 to 653	°F
Mold Temperature	176 to 248	°F
Injection Rate	Fast	

Injection Notes

Feeding zone temperature: 60 to 80°C
Zone4 temperature: 330 to 340°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min