Vectra® A700

Celanese Corporation - Liquid Crystal Polymer

Sunday, November 3, 2019

General Information

Product Description

Some conductivity. Suitable for electrostatic dissipation (ESD) applications. 30% glass reinforced. Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant UL-Listing V-0 at 0.42mm thickness per UL 94 flame testing. Relative-Temperature-Index (RTI) according to UL 746B: electrical 130°C, mechanical 130°C. UL = Underwriters Laboratories (USA)

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Features	• ESD Protection	• Flame Retardant	• Semi Conductive
RoHS Compliance	• Contact Manufacturer		
Resin ID (ISO 1043)	• LCP		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.63	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.40	%	
Flow	0.20	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2.03E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	20300	psi	ISO 527-2/1A/5
Tensile Strain (Break)	1.5	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	2.03E+6	psi	ISO 178
Flexural Stress (73°F)	31900	psi	ISO 178
Compressive Modulus	2.10E+6	psi	ISO 604
Compressive Stress (1% Strain)	14500	psi	ISO 604
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	3.3	ft·lb/in²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	7.1	ft·lb/in²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	5.7	ft·lb/in²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	9.5	ft·lb/in²	ISO 180/1U
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	85		ISO 2039-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	482	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	450	°F	ISO 75-2/A
Heat Deflection Temperature (1160 psi, Unannealed)	352	°F	ISO 75-2/C
Vicat Softening Temperature	313	°F	ISO 306/B50
Melting Temperature [2]	536	°F	ISO 11357-3
CLTE - Flow	4.4E-6	in/in/°F	ISO 11359-2
CLTE - Transverse	1.4E-5	in/in/°F	ISO 11359-2

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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+6	ohms	IEC 60093
Volume Resistivity	1.0E+5	ohms·cm	IEC 60093
Comparative Tracking Index	175	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	V-0		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	302	°F
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.010	%
Hopper Temperature	68 to 86	°F
Rear Temperature	518 to 536	°F
Middle Temperature	527 to 545	°F
Front Temperature	536 to 554	°F
Nozzle Temperature	554 to 572	°F
Processing (Melt) Temp	545 to 563	°F
Mold Temperature	176 to 248	°F
Injection Rate	Fast	
Back Pressure	< 435	psi

Injection Notes

Feeding zone temperature: 60 to 80°C
Zone4 temperature: 285 to 295°C
Hot runner temperature: 285 to 295°C

Notes

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

[2] 10°C/min