

VECTRA® A700

Liquid Crystal Polymer
Celanese Corporation

Message:

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 Information			
UL YellowCard	E83005-251007		
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Electrostatic discharge protection		
	Halogen-free		
	Flame retardancy		
Agency Ratings	EU 2002/96/EC (WEEE)		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Resin ID (ISO 1043)	LCP		
Physical	Nominal Value	Unit	Test Method
Density	1.63	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.40	%	ISO 294-4
Flow direction	0.20	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	85		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	14000	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	140	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.5	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	14000	MPa	ISO 178
Flexural Stress (23°C)	220	MPa	ISO 178
Compressive Modulus	14500	MPa	ISO 604
Compressive Stress (1% Strain)	100	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	7.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	15	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	12	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	20	kJ/m ²	ISO 180/1U

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	250	°C	ISO 75-2/B
1.8 MPa, not annealed	232	°C	ISO 75-2/A
8.0 MPa, not annealed	178	°C	ISO 75-2/C
Vicat Softening Temperature	156	°C	ISO 306/B50
Melting Temperature ¹	280	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	8.0E-6	cm/cm/°C	ISO 11359-2
Lateral	2.5E-5	cm/cm/°C	ISO 11359-2
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
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	4.0 - 6.0	hr	
Suggested Max Moisture	0.010	%	
Hopper Temperature	20.0 - 30.0	°C	
Rear Temperature	270 - 280	°C	
Middle Temperature	275 - 285	°C	
Front Temperature	280 - 290	°C	
Nozzle Temperature	290 - 300	°C	
Processing (Melt) Temp	285 - 295	°C	
Mold Temperature	80.0 - 120	°C	
Injection Pressure	50.0 - 150	MPa	
Injection Rate	Fast		
Holding Pressure	50.0 - 150	MPa	
Back Pressure	0.00 - 3.00	MPa	
Injection instructions			
Manifold Temperature: 285 to 295°CZone 4 Temperature: 285 to 295°CFeed Temperature: 60 to 80°C			
NOTE			
1.	10°C/min		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

