



Vectra® MT4350

Celanese Corporation - Liquid Crystal Polymer

Sunday, November 3, 2019

General Information

Product Description

Vectra® MT4350 VF3001 (natural) is a mineral filled high flow LCP grade for injection molding Vectra MT4350 VF3001 (natural) is a special grade developed for medical industry applications and complies with:

- Food Contact Substance Notification (FCN) No. 742 of the Food and Drug Administration (FDA) and is listed in the Drug Master File (DMF 8464) and the Device Master File (MAF 315)
- the corresponding EU and national registry regulatory requirements
- biocompatibility in tests corresponding to USP 23 Class VI and/or ISO 10993
- low residual monomers
- no animal products

Mineral filled grade with low warp, easy flow and smooth surface appearance.

Chemical abbreviation according to ISO 1043-1 : LCP

Inherently flame retardant

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Mineral		
Features	• Flame Retardant • Food Contact Acceptable • Good Flow	• Good Surface Finish • High Flow • Low Warpage	• No Animal Derived Components
Uses	• Medical/Healthcare Applications		
Agency Ratings	• DMF 8464 • FDA FCN 742	• ISO 10993 • MAF 315	• USP XXIII, Class VI
RoHS Compliance	• Contact Manufacturer		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• LCP		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.74	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.50	%	
Flow	0.0	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.42E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	15200	psi	ISO 527-2/1A/5
Tensile Strain (Break)	3.2	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.45E+6	psi	ISO 178
Flexural Stress (73°F)	18100	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (73°F)	2.5	ft·lb/in ²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	17	ft·lb/in ²	ISO 180/1U

Vectra® MT4350

Celanese Corporation - Liquid Crystal Polymer

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	446	°F	ISO 75-2/A
Melting Temperature ²	635	°F	ISO 11357-3
CLTE - Flow	6.1E-6	in/in/°F	ISO 11359-2
CLTE - Transverse	6.1E-6	in/in/°F	ISO 11359-2
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)	3.60		IEC 60250
Dissipation Factor (1 MHz)	0.031		IEC 60250
Comparative Tracking Index	200	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	338	°F
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.010	%
Hopper Temperature	68 to 86	°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	
Back Pressure	< 435	psi

Injection Notes

Feeding zone temperature: 60 to 80°C
 Zone4 temperature: 330 to 340°C
 Hot runner temperature: 335 to 345°C

Notes

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

² 10°C/min