

VECTRA® MT1300

Liquid Crystal Polymer

Celanese Corporation

Message:

Unreinforced Vectra grade suitable for extrusion.

Chemical abbreviation according to ISO 1043-1 : LCP

Inherently flame retardant

Celanese has established at the FDA a drug master file (DMF no.8468) and a Device Master File (MAF no.315) for Vectra MT1300. These are to assist our customers with their end use FDA petitions. Vectra MT1300 has been tested and complies with USP Class VI.

General Information			
Features	Flame retardancy		
Agency Ratings	DMF 8468		
	MAF 315		
	USP Class VI		
RoHS Compliance	Contact manufacturer		
Processing Method	Extrusion		
Resin ID (ISO 1043)	LCP		
Physical	Nominal Value	Unit	Test Method
Density	1.40	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.70	%	ISO 294-4
Flow direction	0.0	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.030	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	10600	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	182	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	3.4	%	ISO 527-2/1A/5
Tensile Creep Modulus			ISO 899-1
1 hr	9000	MPa	ISO 899-1
1000 hr	6600	MPa	ISO 899-1
Flexural Modulus (23°C)	9100	MPa	ISO 178
Flexural Stress (23°C)	158	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	95	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	53	kJ/m ²	ISO 179/1eU
23°C	270	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	95	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	250	kJ/m ²	ISO 180/1U

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, not annealed	187	°C	ISO 75-2/A
8.0 MPa, not annealed	94.0	°C	ISO 75-2/C
Vicat Softening Temperature	145	°C	ISO 306/B50
Melting Temperature ¹	280	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	4.0E-6	cm/cm/°C	ISO 11359-2
Lateral	3.8E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Dielectric Strength	47	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	3.20		IEC 60250
1 MHz	3.00		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	0.016		IEC 60250
1 MHz	0.020		IEC 60250
Comparative Tracking Index	150	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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