VECTRA® MT4310

Liquid Crystal Polymer

Celanese Corporation

Message:

Highest temperature capability, easiest flow. Suitable where very thin walls are required. Used for broad range of SMT applications, with minimal dimensional change. 30% glass filled.
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 MT4310. These are to assist our customers with their end use FDA petitions. Vectra MT4310 has been tested and complies with USP Class VI.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Good dimensional stability Good liquidity Flame retardancy		
Uses	Thin wall parts		
Agency Ratings	DMF 8468 MAF 315 USP Class VI		
RoHS Compliance	Contact manufacturer		
Resin ID (ISO 1043)	LCP		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.61	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.50	%	ISO 294-4
Flow direction	0.10	%	ISO 294-4
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	71		ISO 2039-2
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	15000	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	150	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.6	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	15000	MPa	ISO 178
Flexural Stress (23°C)	225	MPa	ISO 178
Compressive Modulus	14000	MPa	ISO 604
Compressive Stress (1% Strain)	93.0	MPa	ISO 604
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	22	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	43	kJ/m²	ISO 179/1eU

Notched Izod Impact (23°C)	20	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	31	kJ/m²	ISO 180/1U
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
1.8 MPa, not annealed	276	°C	ISO 75-2/A
8.0 MPa, not annealed	216	°C	ISO 75-2/C
Vicat Softening Temperature	195	°C	ISO 306/B50
Melting Temperature [1]	335	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	7.0E-6	cm/cm/°C	ISO 11359-2
Lateral	2.0E-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	32	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.00		IEC 60250
1 MHz	3.30		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	0.010		IEC 60250
1 MHz	0.025		IEC 60250
Arc Resistance	140	sec	Internal method
Comparative Tracking Index	200	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	V-0		UL 94
Oxygen Index	45	%	ISO 4589-2
Injection	**Nominal Value**	**Unit**	
Drying Temperature	170	°C	
Drying Time	4.0 - 6.0	hr	
Suggested Max Moisture	0.010	%	
Hopper Temperature	20.0 - 30.0	°C	
Rear Temperature	315 - 325	°C	
Middle Temperature	320 - 330	°C	
Front Temperature	325 - 335	°C	
Nozzle Temperature	335 - 345	°C	
Processing (Melt) Temp	335 - 345	°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: 335 to 345°CZone 4 Temperature: 330 to 340°CFeed Temperature: 60 to 80°C

NOTE	
1.	10°C/min

Recommended distributors for this material

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