

Technical Data Sheet

V-MTECK® LCP SL-45

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V-MTECK® LCP SL-45

Features:

V-MTECK® SL-45 is a 45% glass/mineral filled liquid crystal polymer ,which is widely used for 3D-MID(3D-Methatronics Integrated Device) and SMT application。UL-Listing V-0 at 1.5mm thickness per UL 94 flame testing while the water absorption(23°C) shows 0.010-0.013% per ISO 62.

Description

Physical properties	Value	Unit	Test Standard
Density(23°C)	1.80	g/cm ³	ASTM D792
Mold shrinkage - normal(23°C)	0.10	%	ASTM D955
Mold shrinkage - perpendicular(23°C)	0.40	%	ASTM D955
Mechanical properties	Value	Unit	Test Standard
Unnotched impact str (Izod) @ 23°C	36	KJ/m ²	ASTM D256
Flexural strength (2mm/min)	100	MPa	ASTM D790
Flexural modulus (2mm/min)	9000	MPa	ASTM D790
Tensile stress at break (50mm/min)	90	MPa	ASTM D638
Tensile strain at break (50mm/min)	3.0	%	ASTM D638
Thermal properties	Value	Unit	Test Standard
Thermal distortion temperature (10°C/min),1.82MPa	245	°C	ASTM D648
Electrical properties	Value	Unit	Test Standard
Volume resistivity	1E13	Ohm*m	IEC 60093
Surface resistivity	1E14	Ohm	IEC 60093

Typical Injection Processing Conditions:

Pre-Drying:

Necessary to keep residual moisture content below: 0.01%

V-MTECK® SL-45 should be pre-dried before the injection processing. The use of hot air dryers is recommended. The holding time between drying and processing should be as short as possible.

Drying : 4-6Hrs: Drying Temperature: 140-160°C

Temperature	Manifold	Mold	Melt	Nozzle	Zone4	Zone3	Zone2	Zone1	Feed
min (°C)	325	90	315	325	325	325	320	305	60
max (°C)	345	120	345	345	345	345	330	325	80

Pressure

	Injection press	Hold press
min (bar)	500	500
max (bar)	1500	1500

Speed:

Injection speed: medium

Screw speed

Screw diameter (mm)	16	25	40	55	75
Screw speed (RPM)	200	140	80	-	-

Special Info:

For MID applications mold temperature between 120 - 140°C are recommended. For applications with extremely thin wall applications pre-humidity of max. 0,01% is recommended. When using short metering strokes an accumulator is recommended to get short injection.

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