

SUMIKASUPER® LCP E5204L

Liquid Crystal Polymer

Sumitomo Chemical Co., Ltd.

Message:

SUMIKASUPER LCP is a thermotropic liquid crystalline polyester, showing the highest heat resistance among engineering plastics.

General Information			
UL YellowCard	E54705-100988611	E249884-100962019	
Filler / Reinforcement	Long Glass Fiber		
Features	Good Chemical Resistance		
	Good Wear Resistance		
	High Heat Resistance		
	High Rigidity		
	Low Viscosity		
Uses	Bobbins		
	Electrical/Electronic Applications		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.21	g/cm³	ASTM D792
Molding Shrinkage			Internal Method
Flow	0.57	%	
Across Flow	1.7	%	
Water Absorption (Saturation)	0.020	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	90		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	89.0	MPa	ASTM D638
Tensile Elongation (Break)	5.5	%	ASTM D638
Flexural Modulus (23°C)	6960	MPa	ASTM D790
Flexural Strength (Yield, 23°C)	93.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact (6.40 mm)	340	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	351	°C	ASTM D648
CLTE			Internal Method
Flow : 150°C	1.3E-5	cm/cm/°C	

Transverse : 150°C	7.3E-5	cm/cm/°C	
Thermal Conductivity	0.38	W/m/K	JIS R2618
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Dielectric Constant			ASTM D150
1 MHz	3.10		
1.00 GHz	2.80		
Dissipation Factor			ASTM D150
1 MHz	0.018		
1.00 GHz	3.0E-3		
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.290 mm, NC, BK)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	130	°C	
Drying Time	4.0 to 24	hr	
Rear Temperature	350 to 370	°C	
Middle Temperature	370 to 390	°C	
Front Temperature	390 to 410	°C	
Nozzle Temperature	390 to 410	°C	
Processing (Melt) Temp	40.0 to 160	°C	
Mold Temperature	40.0 to 160	°C	
Injection Pressure	120 to 160	MPa	
Injection Rate	Moderate-Fast		
Holding Pressure	40.0 to 60.0	MPa	
Back Pressure	1.00 to 5.00	MPa	
Screw Speed	50 to 100	rpm	

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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

