

SUMIKASUPER® LCP E4008

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	E54705-100988593	E54705-100988594	E249884-100962003
	E249884-100962004		
Filler / Reinforcement	Glass Fiber		
Features	Good Adhesion		
	Good Chemical Resistance		
	Good Dimensional Stability		
	Good Heat Aging Resistance		
	Good Moldability		
	High Heat Resistance		
	High Temperature Strength		
	Low Viscosity		
	Weldable		
Uses	Appliances		
	Automotive Applications		
	Bobbins		
	Electrical/Electronic Applications		
	Engineering Parts		
	Food Containers		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.70	g/cm ³	ASTM D792
Molding Shrinkage			Internal Method
Flow	0.10	%	
Across Flow	1.3	%	
Water Absorption (Saturation)	0.020	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	91		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	150	MPa	ASTM D638
Tensile Elongation (Break)	5.0	%	ASTM D638

Flexural Modulus			ASTM D790
23°C	12300	MPa	
200°C	6300	MPa	
Flexural Strength			ASTM D790
Yield, 23°C	139	MPa	
Yield, 200°C	39.0	MPa	
Shear Strength	52.0	MPa	ASTM D732
Poisson's Ratio	0.49		ASTM E132
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (6.40 mm)	110	J/m	ASTM D256
Unnotched Izod Impact (6.40 mm)	520	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	313	°C	ASTM D648
CLTE			Internal Method
Flow : 150°C	1.4E-5	cm/cm/°C	
Transverse : 150°C	6.2E-5	cm/cm/°C	
Thermal Conductivity	0.57	W/m/K	JIS R2618
RTI Elec (3.20 mm)	200	°C	UL 746
RTI Imp (3.20 mm)	200	°C	UL 746
RTI Str (3.20 mm)	240	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohms · cm	ASTM D257
Dielectric Constant			ASTM D150
1 kHz	4.50		
1 MHz	3.90		
Dissipation Factor			ASTM D150
1 kHz	0.018		
1 MHz	0.034		
Arc Resistance	130	sec	ASTM D495
Comparative Tracking Index	145	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.300 mm, NC, BK)	V-0		UL 94
Oxygen Index	48	%	JIS K7201
Additional Information	Nominal Value	Unit	Test Method
Soldering Resistance	330	°C	Internal Method
Injection	Nominal Value	Unit	
Drying Temperature	120 to 150	°C	
Drying Time	3.0	hr	
Suggested Max Regrind	30	%	
Rear Temperature	330 to 350	°C	
Middle Temperature	350 to 370	°C	

Front Temperature	370 to 390	°C
Nozzle Temperature	370 to 390	°C
Processing (Melt) Temp	380	°C
Mold Temperature	70.0 to 160	°C
Injection Pressure	118 to 157	MPa
Injection Rate	Moderate-Fast	
Holding Pressure	39.0 to 59.0	MPa
Back Pressure	0.980 to 4.90	MPa
Screw Speed	50 to 100	rpm

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