

LC501

- LC501 is a melt-processable fluororesin (PVDF), a high molecular weight polymer of vinylidene fluoride, does not contain other polymers/additives, and the resin is in the form of primary transparent particles.
- LC501 has a very good ratio of strength, abrasion resistance and creep resistance, and is resistant to most chemicals and solvents, as well as oxidants such as liquid bromine and bromine salt solution; it has good weather resistance and does not burn in air. Mainly used in chemical equipment, electronic appliances and architectural coatings.

■ performance parameter

	指标名称 Name of indicators	单位 Unit	LC501	Testing Method	Remark
物理性能 Physical Properties	相对密度 Relative density	g/cm ³	1.75-1.79	ASTM D792	
	熔体流动速率 Melt flow rate	g/10min	≥15	ASTM D1238	
	熔点 Melting point	°C	165±5	GB/T 16582	
机械性能 Mechanical Properties	拉伸强度 Tensile strength	MPa	≥30	ASTM D638	
	断裂伸长率 Elongation at break	%	-	ASTM D638	
	硬度 Hardness	邵氏 Shore hardness	70	ASTM D2240	
	屈服强度 Yield strength	MPa	-	-	
	动摩擦系数 Dynamic friction coefficient	—	0.3	GB/T 10006	
热性能 Thermal Properties	连续使用最高温度 Maximal Temperature of Continuous Work	°C	125	-	
	热变形温度 Heat distortion temperature	°C (1.82MPa)	100	GB/T 19466	
	热膨胀系数 Thermal expansion Coefficient	(-10 ⁻⁵ /°C)	7-14	ASTM D 696	
电气性能 Electrical Properties	体积抵抗率 Volume resistivity	Ω.cm	10 ¹⁵	ASTM D 257	
	绝缘破坏电压 Insulation breakdown Voltage	KV(3.2mm厚)	12	ASTM D149	
	相对介电常数 Relative dielectric Constant	10 ³ Hz	7	ASTM D150	
	介质损耗角正切 Dielectric loss angle tangent	10 ⁶ Hz	<0.1	ASTM D150	

Note: The above data are the representative values of our self-tested products, and are not applicable to formulate specification ranges or be used as the sole basis for design.

■ Features

●LC501 has excellent piezoelectricity, pyroelectricity, high mechanical properties, high insulation and impact resistance, and is widely used in insulators, semiconductor piezoelectric films and fast ion conductor films, etc.

■ Processing

LC501 can be formed by traditional melt extrusion processing, screw injection, molding and blow molding. Since the resin can be efficiently processed at a relatively low temperature, it is close to the processing conditions of polyethylene and polypropylene processing equipment. Corrosion-resistant metals should be selected for extruder and injection molding machine screws, sleeves, molds and other parts that are in contact with resin. The length of the screw of the extruder needs to ensure that the resin is fully plasticized and extruded at a certain speed. The diameter (D) of the screw is 40mm, and the L/D is usually 22:1~25:1. If the L/D is too small, the plasticization will be insufficient and the extrusion speed will be slowed down, so a high molding temperature must be used. It is recommended to use L/D of about 25:1 for this product).

■ Processing

temperature
reference

Processing method	Poster ior/°C	Middle /°C200	Front/°C 215	Machine head/°C 230	Die eye/°C	Nozzle /°C	Pressure /MPa
extrusion molding	190						
injection molding	190	200	215			230	98-147

■ Package

The appearance of LC501 is cylindrical granules, packed in double-layer plastic bags, and the packing specification is 25 kg/bag

■ Storage and use

LC501 resin is not affected by storage time. After the raw material packaging is opened, it should avoid the moisture of the raw material particles and the pollution of the external environment. Please dry it at 120°C for 2 hours before use.

The equipment used for this product must be cleaned, and there must be no residue inside

■ Safety Precautions

CAS No.24937-79-9 Composition 100% .

When the processing temperature of LC501 exceeds 200°C, a small amount of decomposition products will be released. The decomposition products may cause harm to the human body, and the inhalation of these decomposition gases must be avoided. It is therefore essential to ensure that the extruder, process equipment and work area are adequately ventilated.

For more information, please refer to the Material Safety Data Sheet (MSDS) for this product

For more processing information and suggestions, please consult the relevant technical service personnel of Lichang Technology (Ganzhou) Co., Ltd.

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