Technical Data Sheet

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Silfluo LC-FC130

Advanced Fluorinated Electronic Coating

Description:

The LC-FC130 Series is an advanced, high-performance fluorinated electronic coating agent designed to deposit an ultra-thin, nano-scale protective matte film.

Engineered specifically for sensitive electronics, LED displays, and precision instruments, it provides exceptional waterproofing, moisture resistance, and anti-corrosion properties. Formulated with a non-flammable, fast-drying fluorinated solvent, it boasts an outstanding environmental and safety profile—featuring Zero Ozone Depletion Potential (ODP) and full RoHS compliance. It forms a transparent, low-surface-energy barrier that repels water, aggressive condensates, oils, acidic sweat, and corrosive gases. Additionally, it acts as a superior epilame (anti-migration barrier), effectively preventing the unwanted spread of liquid lubricants in precision mechanical assemblies.

Typical Technical Properties:

Active Ingredient:	Premium Fluoropolymer
Appearance:	Milky white liquid
Carrier Solvent:	Fluorinated solvent
Solid Content (%):	2%, 5%, 10% (Customizable upon request)
Dynamic Viscosity (cPs, 25° C):	10 - 30
Odor:	Odorless
Flash Point:	None
Boiling Point (° C) :	50 - 68

Cured Film Properties (By Grade)

Property	LC-FC130-2	LC-FC130-5	LC-FC130-10
Solid Content:	2.0%	5.0%	10.0%
Cured Film Color:	Colorless	Colorless	Colorless
Light Transmittance:	⩾ 90%	⩾ 90%	⩾ 90%
Single-Coat Dry Film Thickness:	0.5 - 1.5 μm	1.0 - 2.0 μm	1.5 - 2.5 μm
Tack-Free Time (Ambient temperature and humidity):	30s	1min	2min
Static Water Contact Angle:	⩾ 110°	⩾ 110°	⩾ 110°
Static n-Hexadecane Contact Angle	⩾ 70°	⩾ 70°	⩾ 70°
Surface Free Energy (mN/m)	10 - 12	10 - 12	10 - 12
Adhesion (ASTM D3359)	5B	5B	5B
Melting Point	25 - 30° C	25 - 30° C	25 - 30° C
Thermal Stability (1% weight loss)	~ 190° C	~ 190° C	~ 190° C

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Dielectric Constant:	3.1	3.1	3.1
Volume Resistivity:	$>10^{14}\Omega\cdot m$	$>10^{14}\Omega\cdot m$	$>10^{14}\Omega\cdot m$
Surface Resistivity:	$>10^{14}\Omega\cdot m$	$>10^{14}\Omega\cdot m$	$>10^{14}\Omega\cdot m$

Features

1. Ultra-thin, nano-scale conformal coating: Forms a transparent, low-glare matte finish without compromising electrical connectivity.
2. Superior Repellency: Delivers robust protection against water, moisture, salt spray, and acidic sweat.
3. Rapid Room-Temperature Cure: Fast-drying formulation designed for high-throughput manufacturing.
4. Outstanding EHS Profile: Non-flammable, non-hazardous, Zero ODP, and fully RoHS compliant.

Coating Process

Suitable for spray coating, dip coating, roll coating, and blade coating.

Applications

1. PCBA & FPCA Shielding: Safeguards sensitive printed circuit boards and electronic components from aggressive condensation, dust, industrial oils, solvents, and corrosive gases.
2. LED Surface Treatment: Provides durable anti-fouling, waterproof, and oil-repellent finishes for LED displays.
3. Precision Anti-Migration (Epilame): Acts as a critical barrier to prevent the creeping of lubricating oils in micro-motors and precision mechanical assemblies (e.g., high-end watches and optical cameras).
4. HDD Component Protection: Effectively shields Magnetoresistive (MR) heads in hard disk drives from lubricant transfer and particulate contamination.
5. Component Sealing: Ideal for the environmental sealing of precision micro-parts.

Packing

In 100g, 500g, 1kg, 25kg.

Safety and Storage

Keep in a cool, dry, and well-ventilated environment, strictly avoiding direct sunlight, heat, and ignition sources. The shelf life is 24 months from the date of manufacture when stored in original unopened containers. Classified as a non-hazardous substance for transport and handling. Storage beyond the shelf life does not necessarily mean the product is unusable; however, the properties required for the intended use must be thoroughly checked for quality assurance reasons prior to application.