



Silfluo LC-FC631/633

Advanced Fluorinated Electronic Coating

Description:

The LC-FC631/633 Series is a premium, fast-drying fluorinated electronic coating engineered to deliver optimal all-round performance for highly demanding environments.

Formulated with an advanced fluoropolymer dissolved in a non-flammable, Zero ODP (Ozone Depletion Potential) carrier solvent, it rapidly deposits an ultra-thin, nano-scale protective film. This highly versatile coating provides an exceptionally well-balanced profile, offering robust repellency against water, moisture, damp-heat conditions, salt spray, acidic sweat, and corrosive gases.

Designed for broad compatibility and ease of processing, it is the ideal conformal coating for safeguarding PCBAs, FPCAs, and sensitive electronic components from harsh industrial and consumer environments. Furthermore, it serves as a highly effective epilame (anti-migration barrier) to prevent the creeping of lubricating oils in precision instruments, micro-motors, and HDD magnetic heads. The LC-FC631 stands out with its outstanding eco-friendly profile and comprehensive reliability, ensuring maximum protection and prolonged service life for critical assemblies. LC-FC631 (Standard Clear) and LA-F633 (UV Traceable, featuring a built-in fluorescent indicator for rapid inspection under black light).

Typical Technical Properties:

Active Ingredient:	Premium Fluoropolymer
Appearance:	Colorless clear liquid
Carrier Solvent:	Fluorinated solvent
Solid Content (%):	2%, 5%, 10% (Customizable upon request)
Odor:	Odorless
Flash Point:	None
Boiling Point (° C) :	50 - 68

Cured Film Properties (By Grade)

Property	LC-FC63-2	LC-FC63-5	LC-FC63-10
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 - 1.0 μm	1.0 - 1.5 μm	1.5 - 2.5 μm
Tack-Free Time (Ambient)	30s	1min	2min
Static Water Contact Angle	≥ 110°	≥ 110°	≥ 110°
Static n-Hexadecane Contact Angle	≥ 75°	≥ 75°	≥ 75°
Surface Free Energy (mN/m)	10 - 11	10 - 11	10 - 11
Adhesion (ASTM D3359)	5B	5B	5B

Technical Data Sheet



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Glass Transition Temperature (Tg)	5 - 10° C	5 - 10° C	5 - 10° C
Thermal Stability (1% weight loss)	~ 260° C	~ 260° C	~ 260° C
Dielectric Constant:	3.1	3.1	3.1
Volume Resistivity:	>10 ¹⁴ Ω·m	>10 ¹⁴ Ω·m	>10 ¹⁴ Ω·m
Surface Resistivity:	>10 ¹⁴ Ω·m	>10 ¹⁴ Ω·m	>10 ¹⁴ Ω·m

Features

1. **Optimal All-Round Performance:** Delivers a highly balanced, comprehensive protective profile engineered to meet a wide range of demanding environmental challenges.
2. **Ultra-thin, Nano-Scale Conformal Coating:** Forms a highly reliable, transparent protective film without compromising electrical connectivity or thermal dissipation.
3. **Superior Repellency & Resistance:** Provides robust, long-lasting protection against water, moisture, damp-heat conditions, salt spray, and acidic sweat.
4. **Rapid Room-Temperature Cure:** Fast-drying formulation designed to significantly enhance high-throughput manufacturing efficiency.
5. **Versatile Processing:** Highly compatible with dip, spray, roll, and blade coating methods for seamless integration into existing production lines.
6. **Outstanding EHS Profile:** Non-flammable, non-hazardous, Zero ODP (Ozone Depletion Potential), 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. **Precision Anti-Migration (Epilame):** Acts as a critical barrier to prevent the creeping and migration of lubricating oils in micro-motors and precision mechanical assemblies (e.g., high-end watches and optical cameras).
3. **HDD Component Protection:** Effectively shields Magnetoresistive (MR) heads in hard disk drives from lubricant transfer and particulate contamination.
4. **Component Sealing:** Ideal for the reliable environmental sealing and protection 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

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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.

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