

LTC

Aromatic Free Low Temperature Coating

DESCRIPTION

Electrolube **LTC** is a fast drying, tough and, highly flexible, modified synthetic rubber conformal coating, designed specifically for the protection of high performance electronic circuitry. Due to its unique base resin, **LTC** maintains its flexibility at extremely low temperatures and provides extremely low moisture vapor permeability. The coating maintains its excellent mechanical and dielectric properties over a wide temperature range especially after thermal shock testing.

READ ENTIRE TECHNICAL BULLETIN BEFORE USING THIS PRODUCT

FEATURES AND BENEFITS

- Low odor, reduces operational hazards; free from aromatic solvents such as Toluene and Xylene.
- Fast touch dry time at room temperature for efficient coating application.
- Extremely flexible at low temperature; maintains protection over a wide temperature range.
- Good resistance to humidity; very low moisture vapor permeability.

APPROVALS

Standard	Status
RoHS Compliant (2015/863/EU)	Yes
IPC-CC-830	Meets Requirements

PRODUCT INFORMATION

For available packaging sizes please visit:

electrolube.com

PHYSICAL PROPERTIES

Category	Results
Liquid Properties	
Appearance	Clear Faint Yellow Liquid
Density @ 25 °C (g/mL)	0.81 ± 0.02
VOC Content	78 ± 1.5%
Flash Point (°C)	Approximately -4
Solid Content	22 ± 1.5%
Viscosity (mPa s @ 20 °C)	150
Touch Dry	10 minutes
Recommended Curing Time 20 °C 80 °C	24 hours 30 minutes
Coverage @ 25 µm	8,8 m ² /L
Dry Film Coating	
Color	Colorless
Operating Temperature Range (°C)	-65 to 130 160 Maximum (Short Periods)
Dielectric Strength (kV/mm)	>80
Surface Insulation Resistance	1 x 10 ¹⁵ Ω
Moisture Resistance (IPC-CC-803B)	Meets Requirements

APPLICATION GUIDELINES

LTC can be sprayed, dipped or brushed. The thickness of the coating depends on the method of application (typically 25-75 microns). Temperatures of less than 16°C or relative humidity in excess of 75% are unsuitable for the application of LTC. As is the case for all solvent based conformal coatings, adequate extraction should be used (refer to MSDS for further information).

Substrates should be thoroughly cleaned before coating. This is required to ensure that satisfactory adhesion to the substrate is achieved. Also, all flux residues must be removed as they may become corrosive if left on the PCB. We manufacture a range of cleaning products using both hydrocarbon solvent and aqueous technology. Our cleaning products produce results within Military specification.

APPLICATION GUIDELINES - BULK

Spraying – Bulk

LTC is suitable both for use in manual spray guns and selective coating equipment. If bulk coating material has been agitated, allow to stand until air bubbles have dispersed.

The selected nozzle should enable a suitable even spray to be applied in addition to suiting the prevailing viscosity. The normal spray gun pressure required is 274 to 413 kPa (40 to 60 lb./sq.in.). After spraying, the boards should be placed in an air-circulating drying cabinet and left to dry.

TYPICAL PRODUCT APPLICATION

Dip Coating

Ensure that the coating material in the container has been agitated thoroughly and has been allowed to stand for at least 2 hours for all the air bubbles to disperse.

The board assemblies should be immersed in the LTC dipping tank in the vertical position, or at an angle as close to the vertical as possible. Connectors should not be immersed in the liquid unless they are very carefully masked. Our Peelable Coating Mask (PCM) is ideal for this application.

Leave submerged for approximately 10 seconds until the air bubbles have dispersed. The board or boards should then be withdrawn slowly (1 to 2 Seconds / mm) so that an even film covers the surface. After withdrawing, the boards should be left to drain over the tank or drip tray until the majority of residual coating has left the surface. After the draining operation is complete, the boards should be placed in an air-circulating drying cabinet and left to dry.

Brushing

Ensure that the coating material has been agitated thoroughly and has been allowed to settle for at least 2 hours at ambient temperature. When the brushing operation is complete the boards should be placed in an air-circulating drying cabinet and left to dry.

INSPECTION

LTC contains a UV trace, which allows inspection of the PCB after coating to ensure complete and even coverage; the stronger the reflected UV light, the thicker the coating layer is. UV light in the region of 375nm should be used for inspection.

ADDITIONAL INFORMATION

Shelf Life

Description	Shelf Life
LTC Conformal Coating	24 Months
LTC Thinners	36 Months
Removal Solvents	
Aerosol	36 Months
Bulk	72 Months

SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

CONTACT INFORMATION

To confirm this document is the most recent version, please contact
TechnicalSupportTeam@hkw.co.uk
www.electrolube.com

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE . Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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