LTC
Aromatic Free Low Temperature Coating

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 vapour permeability. The coating maintains its excellent mechanical and dielectric properties over a wide temperature range especially after thermal shock testing.

- Low odour, 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 vapour permeability.

Approvals	**RoHS Compliant (2015/863/EU):**	**Yes**
	IPC-CC-830:	**Meets Requirements**
Liquid Properties	Appearance:	Clear Faint Yellow Liquid
	Density @ 25°C (g/ml):	0.81 ± 0.02
	VOC Content:	78 ± 1.5%
	Flash Point:	Approx. -4 °C
	Solids content:	22 ± 1.5%
	Viscosity (mPa s @ 20°C):	150
	Touch Dry:	10 minutes
	Recommended Curing Time:	24 Hours @ 20°C 30 minutes @ 80°C
	Coverage @ 25µm:	8.8 m^2 per litre
Dry Film Coating	Colour:	Colourless
	Operating Temperature Range:	-65 °C to +130 °C
	Max. Operating Temperature (Short periods):	160 °C
	Dielectric Strength:	>80 kV/mm
	Surface Insulation Resistance:	1 x 10^{15} Ω
	Moisture Resistance (IPC-CC-803B):	Meets requirements

Ashby Park, Coalfield Way,
Ashby de la Zouch,
Leicestershire LE65 1JR
T +44 (0)1530 419 600
F +44 (0)1530 416 640
BS EN ISO 9001:2008
Certificate No. FM 32082

Description	Packaging	Order Code	Shelf Life
LTC Conformal Coating	5 Litre	LTC05L	24 Months
LTC Thinners	5 Litre	LTCT05L	36 Months
Removal Solvent	200 ml Aerosol	ULS200D	36 Months
	400 ml Aerosol	ULS400D	36 Months
	1 Litre Bulk	ULS01L	72 Months
	5 Litre Bulk	ULS05L	72 Months
	25 Litre Bulk	ULS25L	72 Months

Directions for Use

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. Electrolube manufacture a range of cleaning products using both hydrocarbon solvent and aqueous technology. Electrolube cleaning products produce results within Military specification.

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 (40-60 lbs/sq.inch). After spraying, the boards should be placed in an air-circulating drying cabinet and left to dry.

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.

Ashby Park, Coalfield Way,
Ashby de la Zouch,
Leicestershire LE65 1JR
T +44 (0)1530 419 600
F +44 (0)1530 416 640
BS EN ISO 9001:2008
Certificate No. FM 32082

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. Electrolube 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.

Revision 2: June 2016

Ashby Park, Coalfield Way,
Ashby de la Zouch,
Leicestershire LE65 1JR
T +44 (0)1530 419 600
F +44 (0)1530 416 640
BS EN ISO 9001:2008
Certificate No. FM 32082