DCE
SCC3 Elastomer Gel

DCE is a thixotropic version of DCA, formulated to provide ease and consistency in robotic dispensing whilst still ensuring desired protection for electronic circuitry. DCE is ideally suited for use with DCA to protect specific components on a circuit board that may be difficult to coat due to size, shape and position.

- Formulated to provide ease and consistency in robotic dispensing
- Thixotropic gel; ideal for solving unwanted coating migration due to the capillary effect
- Designed for use with Electrolube DCA; provides a total solution for coating processes
- Can be reworked using specialist removal product, Electrolube CCRG

Approvals	**RoHS Compliant (2015/863/EU):**	**Yes**
	UL746C-QMJU2:	**Meets approval**
	DEF-STAN 59/47 (Issue 4):	**Meets approval**
	IPC-CC-830:	**Meets approval**
Liquid Properties	Appearance:	Clear Pale Straw
	Density @ 20°C (g/ml):	0.97
	VOC Content:	68%
	Flash Point:	27°C
	Solids content:	40%
	Viscosity @ 20°C:	Thixotropic
	Touch Dry:	2 Hours
	Recommended Curing Schedule:	4 Hours @ 20°C followed by: 2 - 24 Hours @ 90°C to 120°C
	*(Maximum Solvent Resistance Achieved @ 120°C; Ambient Curing Schedule: 24 Hours @ 20-25°C)	
	Coverage @ 25 µm:	16.8m^2 per litre
Cured Film Coating	Colour:	Colourless
	Operating Temperature Range:	-70°C to +200°C
	Flammability:	Self extinguishing
	Thermal Cycling (MIL-1-46058C):	Meets approval
	Coefficient of Expansion:	90ppm
	Dielectric Strength:	90 kV/mm
	Dielectric Constant:	3.95 @ 1MHz
	Surface Insulation Resistance:	1 x 10^{15} Ω
	Dissipation Factor (@ 1MHz 25°C):	0.037
	Moisture Resistance (MIL-1-46058C):	Meets approval
	UV Trace	Yes

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All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification.

Electrolube cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.

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Description	Packaging	Order Code	Shelf Life
DCE Conformal Coating	0.75 Litre Bulk	DCE0.75L	12 Months
Conformal Coating Removal Gel	1 Litre Bulk	CCRG01L	36 Months

Directions for Use

DCE is a thixotropic material specially formulated to provide ease and consistency in robotic dispensing. Temperatures of less than 16°C or relative humidity in excess of 75% are unsuitable for the application of DCE. As is the case for all solvent based conformal coatings, adequate extraction should be used (refer to SDS for further information).

Substrates should be thoroughly cleaned before coating. This is required to ensure that satisfactory adhesion to the substrate is possible. 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.

Drying Times and Curing Conditions

The properties gained from DCE are dependent on the curing schedule employed. It is essential that the coating be allowed a minimum of 4 hours drying time at ambient temperature prior to any heat curing. This is necessary to allow the solvent system to evaporate.

Ambient Ambient curing is via solvent evaporation only. Eliminating the heat curing step will reduce solvent resistance. Other properties, such as resistance to humid and corrosive environments, may also reduce but still meet the requirements of many industry standards. Coated boards should be left at room temperature for the solvent to evaporate; extraction is required in the curing area.

Commercial Most commercial users will gain satisfactory performance from this coating by curing for two hours at 90°C after the 4 hour ambient cure. This will give limited resistance to solvents.

Military If the assemblies are to be used under conditions of high temperature or be exposed to extremes of thermal cycling, the coating should be cured for 24 hours at ambient followed by 24 hours at 90°C. This curing schedule will give resistance to the more aggressive solvents.

It is recommended that the coating be thoroughly cured on circuits, which have design areas of very high impedance that require adjustment after application.

Inspection

DCE 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.

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