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AFA-F
Aromatic-Free Acrylic Coating (Film-Coat)

AFA-F is an acrylic conformal coating formulated especially for use with selective coating machines using non-atomised film-coat applicators. The coating is formulated without the use of hazardous aromatic solvents. It has been designed for the protection of electronic circuitry and meets the requirements of many industry standards. AFA is UL recognised, achieving UL94 V-0.

- Fast touch dry time; specially formulated for use in non-atomised film-coat applicators
- Transparent coating with excellent clarity and UV resistance; ideal for LED applications
- Outstanding salt-mist resistance and excellent adhesion to a variety of substrates
- Reduces operational hazards; free from aromatic solvents such as Toluene and Xylene

Approvals	**RoHS Compliant (2015/863/EU):**	**Yes**
	IPC-CC-830:	**Meets Requirements**
	UL746-QMJU2:	**Approved File Number: E138403**
Liquid Properties	Appearance:	Pale Coloured Liquid
	Density @ 20°C (g/ml):	0.87
	VOC Content:	80%
	Flash Point:	Approx. -7°C
	Solids content:	20%
	Viscosity (mPa s @ 25°C):	55-75
	Touch Dry:	5-10 minutes
	Recommended Curing Time:	24 Hours @ 25°C 30 Mins @ 70°C
	Coverage @ 25µm:	$8m^2$ per litre
Dry Film Coating	Colour:	Colourless
	Operating Temperature Range:	-65°C to +125°C
	Flammability:	UL94 V-0
	Thermal Cycling (IPC-CC-830B):	Meets Requirements
	Coefficient of Expansion:	130ppm
	Dielectric Strength:	45kV/mm
	Dielectric Constant:	2.5
	Surface Insulation Resistance:	1×10^{15} Ω
	Comparative Tracking Index:	>300 Volts
	Dissipation Factor @ 1MHz, 25°C:	0.01
	Moisture Resistance (IPC-CC-830B):	Meets Requirements

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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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Certificate No. FM 32082

Description	Packaging	Order Code	Shelf Life
AFA-F Conformal Coating	5 Litre	AFAF05L	24 Months
Removal Solvent	1 Litre Bulk	ULS01L	72 Months
	5 Litre Bulk	ULS05L	72 Months
	25 Litre Bulk	ULS25L	72 Months
AFA Gel	35ml syringe	AFAG35SL	24 Months

Directions for Use

AFA-F has been specifically designed for spray applications. The thickness of the coating depends on the application parameters (typically 25-75 microns). Temperatures of less than 16°C or relative humidity in excess of 75% are unsuitable for its application. As is the case for all solvent based conformal coatings, adequate extraction should be used (refer to MSDS for further information).

Although AFA-F displays outstanding adhesion to a variety of substrates, it is recommended that substrates should be thoroughly cleaned before coating. This is required to ensure that satisfactory adhesion to the substrate is achieved and to prevent flux residues causing corrosion on the PCB. In a 'no-clean' assembly process, the user should evaluate materials compatibility to ensure the combination of materials is fit for purpose and capable of withstanding the expected end-use environment. Electrolube manufacture a range of cleaning products using both hydrocarbon solvent and aqueous technology, which all produce results within Military specification.

Spraying - Bulk

AFA-F has been specifically formulated for use with selective coating machines using non-atomised or film-coating applicators. The material is supplied in a convenient, ready-to-use form, removing the need for on-site mixing and eliminating opportunities for error and variation in process. Optimum fluid pressures, valve settings, application speeds etc. will depend upon many factors and will vary from machine to machine and from circuit board to circuit board. Initial tests should be conducted to establish the correct parameters to achieve the desired coating application.

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. Brushing is only advised for touch-up or rework application.

Inspection

AFA-F 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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