# Conformal Coatings Technical Data Sheet



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# WBPS Aquacoat Plus – Aqueous Conformal Coating (Sprayable)

WBPS is a water based conformal coating specifically formulated for the protection of electronic circuitry. Designed for application via spraying, WBPS offers the ideal combination of a high specification coating with very low VOC emissions.

- Low viscosity version; ready to use for spraying application
- Environmentally friendly coating due to very low VOC emissions; reduced production costs
- Eliminates the use of hazardous solvents and is NMP free; significantly reduces operator risks
- Contains a UV trace; ensures quality of coating by visual inspection

Approvals	RoHS-2 Compliant (2011/65/EU): MIL Approval (MIL-1-46058C): IPC-CC-830:	Yes Meets approval Meets approval
Liquid Properties	Appearance: Density @ 20°C (g/ml): VOC Content: Flash Point: Solids content: Viscosity @ 20°C (mPa s): Touch Dry: Recommended Drying Time:	Milky White 1.03 <10% >100°C 35% 60-100 25-35 minutes 24 hours @ 20°C, or 2 hours 20°C followed by 2 hours @ 60°C *Optimum properties achieved after 7 days
Dry Film Coating	Coverage @ 25µm: Colour: Operating Temperature Range: Flammability: Thermal cycling (MIL-1-46058C): Coefficient of Expansion: Dielectric Strength: Dielectric Constant: Surface Insulation Resistance: Dissipation Factor @ 1MHz, 25°C: Moisture Resistance (MIL-1-46058C):	14 m <sup>2</sup> Clear transparent -60°C to +125°C Meets UL94-V1 Pass 125 ppm 50 kV/mm 2.6 5 x 10 <sup>11</sup> $\Omega$ 0.03 Pass

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Description	Packaging	Order Code	Shelf Life
Water Based Conformal Coating (Sprayable)	5 Litre Bulk	WBP05LS	12 Months
Water Based Conformal Coating	5 Litre Bulk	WBP05L	12 Months
Deionised Water Thinners	5 Litre	DEI05L	36 Months
Conformal Coating Removal Gel	1 Litre Bulk	CCRG01L	36 Months

## **Directions for Use**

WBPS is designed for spraying applications. For dipping applications please see WBP. 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 WBPS.

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

WBPS is suitable for use in manual spray guns. 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 275 to 413kPa (40 - 60 lbs/sq.inch). After spraying, the boards should be placed in an air-circulating drying cabinet and left to dry.

### **Inspection**

WBPS 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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