SWAC
Safewash Low Foam Concentrate

SWAC is a low foaming concentrate which is designed to be diluted with deionised water for use in both ultrasonic and pressure spray wash equipment (batch dishwasher and in-line systems). It is extremely effective for the removal of flux residues and uncured pastes from boards and stencils used in surface mount production. SWAC is part of the Electrolube Safewash range; water-based, non-flammable, biodegradable solvent blends designed to clean to within military cleanliness standards, (ANSI-J-001B/IPC TM-650).

- Removes flux residues and uncured pastes; ideal for cleaning boards and stencils
- Low foaming action; suitable for use in pressure wash systems
- Aqueous blend of solvents and organic saponifiers; does not contain hazardous solvents
- Non-flammable product, 100% ozone friendly; suitable for use in standard cleaning equipment

Approvals	**RoHS-2 Compliant (2011/65/EU):**	**Yes**
Typical Properties (Concentrate)	Form	Liquid
	Colour	Colourless
	Boiling Point	>100^{o}C
	Flash Point	>115C
	Freezing point	< -10C
	Density @ 20^{o}C (g/ml)	0.94
	Viscosity @ 20^{o}C (mPa s)	15-25

Description	Packaging	Order Code	Shelf Life
Safewash SWAC	5 Litre	SWAC05L	48 Months

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BS EN ISO 9001:2008
Certificate No. FM 32082

Directions for Use

As with all aqueous based products, the cleaning process is a 4-stage system; clean, rinse with tap water, rinse with deionised water, dry. The exact timings for cleaning will be dependent on the type of flux/paste, the reflow profile used, the age of residues, the temperature and concentration of the cleaner and the type of equipment used. Some starting points are provided below:

Dishwasher systems
Use at a concentration of 15–25% in deionised water. A typical wash cycle would comprise of 10 mins at 40–55°C, tap water rinse for 5 mins at 45–65°C; deionised water rinse 5 mins at 45°C; drying at 70°C

In-line systems
Use at a concentration of 15% in the wash. Re-circulation of the solution via angled high pressure spray nozzles allows effective cleaning under components and on both sides of the board. A typical wash cycle would comprise of 3-5 mins at 40–50°C; tap water rinse for 5 mins at 40-50°C; deionised water rinse for 5 mins at 40–50°C; drying at 70–90°C

Ultrasonic systems
Use at a concentration of 15–25%. A typical wash cycle would comprise of 15 mins at 45°C; tap water rinse 5 mins at 45°C; deionised water rinse 5 mins; drying at 70°C

The temperature of the rinsing solution can be ambient, but higher temperatures in addition to agitation, will accelerate and improve rinsing.

The length of time required to dry the PCB depends on the circuit design and the efficiency of the drying unit itself. This is enhanced by equipment that uses high air flow as opposed to 'heat only' systems. In general, this stage takes approximately 5 minutes at 90°C. Air-knives can be used as an optional extra to reduce temperature or total energy required.

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