

Technical Data Sheet



WAVE FLUX

Product Name: Surf 350

Product Type: No-clean Flux type ORL0

Description

Surf 350 is halide free activated. The new formula of the activators guarantees an optimum wetting of the different surfaces (such as OSP, Ni/Au, HAL, chem Sn and chem Ag) used in PCB manufacturing and so avoids problems when new printed circuit boards with alternative surfaces are introduced. The EF350 may be used with lead-containing and lead-free solders, where best wetting result may be achieved. A low percentage of special additives were integrated into the flux formulation in order to meet the requirements on the soldering behaviour of the flux and the electrical safety of the residues, left after soldering.

Typical Properties

Chemistry :	
Colour:	light yellow
Density at (20° C):	0.811 g/cm ³
Flash point (closed crucible):	12 °C
Ignition temperature:	425 °C
Solid content:	3.5 %
Acid rating:	27.0 mg KOH/g

Recommended Processing Guidelines

Foam Application:

The recommended stone should preferably have a pore size of 10-20 microns. This will ensure that the foam head is fine and uniform. The stone is best positioned between 2-4 cm. (3/4-1½") below the level of the liquid flux so as to maintain an undisturbed head of foam.

If the flux becomes too concentrated due to excess solvent evaporation, dilution to the appropriate level must be made using the specially formulated thinner VD500.

The flux is completely biodegradable. The main concern is the low flash point and consequent fire risk due to the alcohol content.

Spray Application:

The use of thinners will not be required. The flux is used as supplied and the fresh flux is spray applied to the board.

Preferred Upper Limit of Flux Coverage:

To ensure that the soldered boards pass the cleanliness test, the upper limit for flux coverage is 30ml/m² circuit.

Key Benefits

- Multi-purpose application, low residues
- Moderate solid content - fast wetting - reduces soldering defects
- No-clean application, electrically safe
- Perfect wetting results with lead containing and lead-free

Residue Properties

Halide content:	none
Copper mirror test:	passed
Silver chromate paper test:	passed
Surface Insulation Resistance:	>10 ⁸ Ω
Corrosion:	none

Classified as type 2.2.3.A according to DIN-EN 29454-1, type ORL0 according to EN 61190-1-1 and type ORL0 according to J-STD-004

Topside Preheat

The maximum temperature reached on the bottom side (the side to be soldered) should be approximately 120-130°C. For double-sided boards this will represent between 90 o and 100°C on the topside of the board. At the exit of the preheat zone is enough to get a good wetting and quality solder joints.

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Safety

Because the principle solvent is isopropanol, care must be exercised due to a low flash point. Flame suppression equipment and associated precautions, as with any other IPA based flux, are mandatory.

General Notes

The recommended leading to a contact time with the molten solder of 3-5 seconds. The solder temperature can be as between 245-260 °C for SnPb alloy and 260-280 for Lead free alloy, where maximum flux efficiency is achieved.

The Surf 350 is manufactured by Stannol
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Cleaning

Although designed as a no clean product, if residues need to be removed they can readily be removed.

Storage Conditions

The flux must be stored at room temperature between. The shelf life in this condition is maximum 24 months. The direct exposition to the sun light and warm source must be avoid due to the flammability danger. Ensure that the flux has reached room temperature before use.

The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for a particular application.

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