FELDER seit 1979 LÖTTECHNIK

Product Information

FELDER Electronic Flux

ISO-FLUX® "ClearWave" and "ClearWave S"

No-clean fluxes for wave soldering processes in the production of electronic assemblies

ClearWave acc. to IPC J-STD-004 / ORL0
ClearWave S acc. to IPC J-STD-004 / ORL0

Item-no.: 25 72 00.. (ClearWave)
Item-no.: 25 71 00.. (ClearWave S)

Properties

ISO-Flux® **"ClearWave"** and **"ClearWave S"** are colophony- and halide-free no-clean fluxes based on alcohol for the automatic soldering of PCBs with THT- and SMD-mounting. They have been developed for the high soldering temperatures in lead-free soldering technology but can also be used in the leaded soldering process. They have very good activation and excellent spreading properties on all common soldering surfaces. The low solids content ensures optically residue-free soldering.

	ClearWave	ClearWave S
Solid content in %	2.0	2.2
Acid value	12.9	
Density (20 °C) in g/cm³	0.791	0.794
Halide content in %	<0.01	
Resin content in %	0	0.2
Colour	water-clear to slightly transparent beige	

SIR and migration test procedures

Isolation resistance (comb pattern according to IPC-B-24)

Sample preparation: Test A, 3 comb patterns (blind test)
Test B, apply 3 comb patterns with flux, after drying put it on the solder bath at 245 - 260 °C for 4+1 seconds with comb pattern side upwards.
Test C, like B, but put comb pattern side downwards on the solder bath.

Result: **SIR-Test passed uncleaned and cleaned**

E-corrosion

Sample preparation: The comb patterns of the isolation test will be stored after 4 days humidity test for further 21 days in climate 40 °C / 93 % rel. humidity at applied direct voltage (+5VDC).

Result: **none e-corrosion**

ISO-Flux® **"ClearWave"** and **"ClearWave S"** were tested for their compatibility with the substances commonly used in electronics manufacturing. A compatibility test against the plastics, colours and labels used by the user is recommended. The electronic circuit can generally be coated with insulating lacquers that are commercially available. However, the user should convince himself of possible interactions.

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Application

Application to the printed circuit board can be carried out using all known fluxing methods (e.g. foaming, spraying, jetting, etc.).

ISO-Flux® **"ClearWave"** is ideally suited for wave soldering systems with spray fluxers as well as for selective soldering systems, especially with drop jet fluxers, because clogging of the jet nozzles can be ruled out and the spray mist is not sticky (no sticky residues on transport frames and masks).

ISO-Flux® **"ClearWave S",** the resin containing variant**,** has been optimised for wave soldering units with application by foaming-fluxers and also for the selective soldering process with spray fluxer systems. The minimal resin content ensures a very fine-pored foam crown and forms a physical resin encapsulation for flux residues that have not fully reacted.

ISO-Flux® **"ClearWave"** and **"ClearWave S"** are ready-made and are used undiluted in modern spray- and jet-fluxers. In case of open flux systems (foaming-, jet- and dip fluxers) the acid value has to be determined daily by titration. This test can be carried out without any great effort by the machine operator using our **FELDER Titration Set** (item no. 27900099). Based on the corresponding dilution profile the acid value can be optimally adjusted with **FELDER Flux Thinner "VF-2"** (item no. 258001..).

The typical preheat temperature measured on the component side of the printed circuit board should be 100 °C to 130 °C). When using leaded solders, the measured temperature should be 80-110 °C.

For the lead-free selective soldering process, we recommend a solder bath temperature of 300 °C.
The ideal solder bath temperature for leaded wave soldering process is ≤ 250 °C.

Recommendable is a speed over the solder wave of 0.8 – 1.6 m per minute.

Minimum Durability and Storage Advice

When unopened and stored properly, the fluxes have a shelf life of 24 months from production. The recommended storage temperature is +5 °C to +25 °C.

Security Instructions

Please refer to the corresponding material safety data sheet.

Delivery Form

1000 ml	jar
10 l	canister

 Status: 07/25

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