

Electronic flux ISO-Flux[®] "ELR 3420"

Low-residue No-clean flux for the wave soldering

Electronic flux ISO-Flux[®] "ELR 3420"
DIN EN 61190-1-1 / ORL0 (DIN EN 29454-1 / 2.2.3.A)

Article no.: 258420..

Description

ISO-Flux[®] "ELR 3420" is a halide free flux on alcohol basis for the automatic soldering of P.C.B's with standard and SMD-mounting in connection with lead containing as well as lead-free standard electronic solders. The flux shows very good activating properties and has excellent spreading properties on **all** common solder surfaces.

ISO-Flux[®] "ELR 3420" has especially been developed for the purpose of an inertisation of organic surfaces as well as against blob development during the wave soldering process. Especially for photopolymere solder resist masks, for two component solder resist masks as well as untreated basis material this flux prevents through its special preparation as far as possible the corresponding development mechanism respectively an affinity at the interface.

The endangerment potential according to the malfunctions of the surface mounted assembly will extremely be minimized through blobs from place to place and reduction of the cost intensive rework.

ISO-Flux[®] "ELR 3420" is very temperature stable and therefore very suitable for the lead-free soldering technique. In connection with with lead free solder it shows very good results til melting temperature of 230°C.

Properties

Solid content	:	3,5%
Acid value	:	24
Density (20°C)	:	0,813 g/cm ³
Flash point	:	<12°C
Halide content	:	halide-free
Colour	:	colour of amber
Thinner	:	VF-1

Application

ISO-Flux[®] "ELR 3420" is especially suitable for the highly qualified production of commercial electronic and achieves with SMD-mounting best results.

The application of the flux on the P.C.B. is practicable with all well known flux procedures (e. g. foams, sprays etc.).

Electronic flux ISO-Flux[®] "ELR 3420"

ISO-Flux[®] "ELR 3420" is conceived for the soldering in the double wave as well as conceived for the soldering in the single wave.

After the soldering the circuits as far as possible free of residues. Therefore, the cleaning can be left out. The cooled down flux distinguishes itself through its well isolation properties, which are kept by the humidity demands.

A lacquer ability of the cooled down circuit with common isolation lacquers are usually given. The Applicant should convince himself of the compatibility.

As quality security measures following tests were made:

Isolation resistance

Comb pattern according to IPC-B-24

Sample preparation

Test A, apply 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 **upward**, cleaned.

Test C, like B, but put comb pattern side **down** on the solder bath.

Result

SIR-Test passed uncleaned and cleaned

E-corrosion

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

Preheat temperature

The typical preheat temperature measured at the component side of the printed circuit, should be 80°C - 110°C (choose a preheat temperature of 20 – 30°C if a lead-free solder is applied).

Solder bath temperature

The ideal solder bath temperature in lead-containing solder process should not exceed 250°C.

For the lead-free soldering process we recommend a max. solder bath temperature of 280°C.

Solder speed

Recommendable is a speed over the solder wave of 0,8 - 1,6 m per minute.

Electronic flux ISO-Flux[®] "ELR 3420"

Further advices

ISO-Flux[®] "ELR 3420" will be tested according to its compatibility against the common materials used in the electronic production. A compatibility test against plastics, colours and labelling by the users is recommended.

Delivery form

10 ml	flux-pen
1000 ml	jar
5 and 25 l	canister
200 l	hobcock

Minimum durability

6 months from production.

If the flux systems are open the acid value has to be measured by titration daily. This can be carried out without any great effort by the machine operator with our FELDER **titration set**.

Storage advices

A storage temperature of between +5°C and +20°C is recommended.

Security instructions

Please refer to the corresponding safety data sheet.

All information about our products are the result of our long-standing experience, which we would like to pass on to our customers. Since we do not have any influence on the application with our products, please see the warranty claims in our conditions of sale because our liability is limited.