

ECOFREC™ VLR 129



No clean, very low residue flux

FEATURES

ECOFREC™ VLR 129 is a very low dry extract flux which can be used by foam or by spray. It has been developed to have an excellent wettability on different PCB finishes system as OSP, Ni/Au, HASL... Low odour.

SPECIFICATIONS

Density at 20°C	0.814 – 0.822
Flash point	16°C
Dry extract, 3 h at 105°C	1,9 %
Halogen Content	no halogen
Acid index, mg KOH/g of solution	19

CHARACTERISTICS

Its activation system, without any halide (Fluoride, Chloride or Bromide) and no amine, is eliminated after wave soldering, without leaving any visible residue on printed circuit boards.

After ageing the cards in a humidity chamber at different temperatures and under bias, the performance in terms of surface insulation resistance are particularly high. The SIR on IPC B25 Pattern is around 10^{10} ohms after 28 days, at 40°C, 93 % RH under 5 Volts or 28 days at 85°C, 85 % RH under 50 Volts.

Taking into account the non aggressiveness of its residue, **ECOFREC™ VLR 129** is recommended when the cleaning step of PCB is eliminated.

Surface insulation resistance

The SIR value obtained are particularly high and near equivalent to that for unsoldered control boards.

Pin point tester

Taking into account the absence of residue after wave soldering, **ECOFREC™ VLR 129** allows no interference with electrical probes.

PACKAGING

Plastic drums 20 l

STORAGE & SHELF LIFE

ECOFREC™ VLR 129 must be stored in a cool and well-ventilated place (between 5° and 30°C) in securely closed packaging, protected from freezing. A shelf life of no longer than a year is recommended.

ECOFREC™ VLR 129 must be stored at the temperature of the production plant for 12 hours before use.

PROCESS PARAMETERS

The spray application allows a uniform flux coverage on the circuit.

After flux application, preheat the printed circuit until the topside board temperature reaches 110-130°C prior to entering the solder wave. The temperature level obtained after preheat and solder wave will allow to eliminate all the residue and therefore to have a good cosmetic aspect of the PCB.

Flux Control : Contrary to some low residue flux, the flux control can easily be done by adjusting the density to its nominal value. The acid index is a complementary control but is not compulsory.

The density of **ECOFREC™ VLR 129** must be checked regularly and must be kept at nominal density by adding Diluent n°1. Depending on the PCB and components oxidation level, it is possible to work in a density range of 0,818 to 0,830 without SIR failure.

In practice, INVENTEC recommends adding **ECOFREC™ VLR 129** and Diluent n°1 alternately, to maintain the level in the flux equipment. Temperature must be taken into account while density measurement - (cf. figures 1 & 2). To ensure performance consistency, it is recommended to completely renew the flux every 40 hours work, depending on the production rate.

HSE

ECOFREC™ VLR 129 must be handled in a well-ventilated room far from any flame. Vapours must be evacuated from flux and solder work stations by efficient aspiration.

Refer to Material Safety Data Sheet before use.

No issues when used as recommended.

This data is based on information that the manufacturer believe to be reliable and offered in good faith. In no event will INVENTEC be responsible for special, incidental and consequential damages. The user is responsible to the Administrative Authorities (regulations for the protection of the Environment) for the conformity of his installation.

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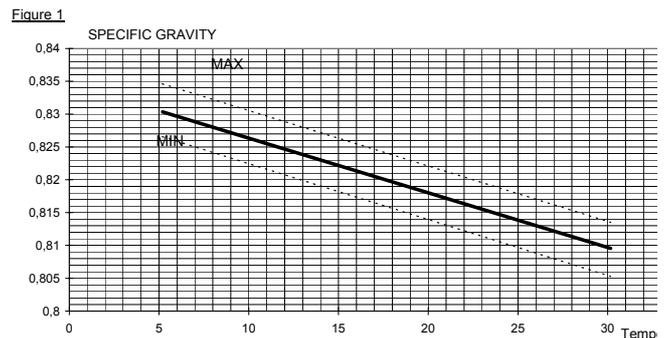


Figure 2

Volume of Thinner N°1 to be added to 1 liter of Ecofrec to get the needed specific gravity

1st example : from 0.830 to 0.820, add 285 ml Thinner N°1

2nd example : from 0.824 to 0.814, add 345 ml Thinner N°1

