

ECOFREC™ 202



No clean, very low residue flux
Lead Free soldering

FEATURES

ECOFREC™ 202 is a very low dry extract flux which can be used for lead free soldering, by foam or by spray. It has been developed to have a good wettability on different PCB lead free finish as OSP, Ni/Au, Sn, Ag.

SPECIFICATIONS

Appearance	Colourless liquid
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.

Taking into account the absence of residue after wave soldering, **ECOFREC™ 202** allows no interference with electrical probes.

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™ 202** is recommended when the cleaning step of PCB is eliminated.

FUNCTIONAL TESTS	Results	Procedures
Classification	ORL0	ANSI/J-STD-004
Copper mirror	pass	ANSI/J-STD-004
Silver chromate paper	pass	ANSI/J-STD-004
SIR	passed (see curve below)	IPC TM 650
Bono test	passed	INVENTEC MO.SB.10029

STORAGE & SHELF LIFE

ECOFREC™ 202 must be stored in a cool and well-ventilated place (between 5° and 30°C) in securely closed packaging, protected from freezing.

ECOFREC™ 202 must be stored at the temperature of the production plant for 12 hours before use.

Plastic drums	20 L	18 months
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USE CONDITIONS

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™ 202 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™ 202 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.

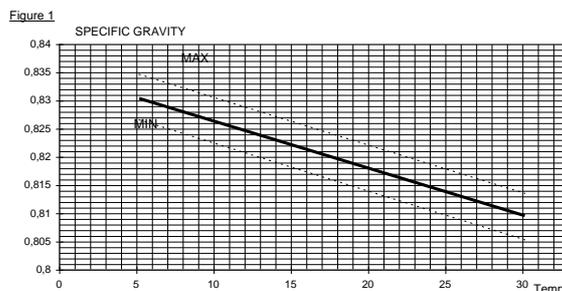
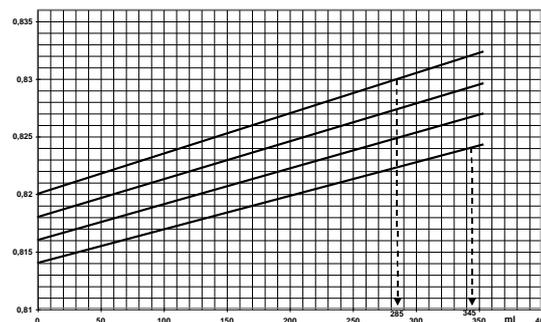


Figure 2
Volume of Thinner N°1 to be added to 1 liter of Ecofrec to get the needed specific gravity
1st example : from 0.830 to 0.820, add 285 ml Thinner N°1
2nd example : from 0.824 to 0.814, add 345 ml Thinner N°1



HSE

ECOFREC™ 202 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.

Use in well-ventilated areas. Safety glasses and gloves should always be worn when handling the flux.

No issues when used as recommended.

Please refer to Material Safety Data Sheet before use.

INVENTEC Material Safety Data sheets can be found at www.quickfds.com

Although the conformity to ROHS 2015/863/UE applies to EQUIPMENT put on the market and not a component in particular, we warranty that this product does not contains in quantities exceeding less than 0.1% of Hg, Pb, Cr VI, PBB, PBDE, DEHP, BBP, DBP, DIBP and less than 0.01% of Cd, in accordance with the decision of The European Commission, fixing the maximal concentration values.

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