

# ECOFREC™ 200



Low residue no-clean air or nitrogen atmosphere

## FEATURES

**ECOFREC™ 200** is an alcohol based low-residue no clean flux recommended for soldering either with air or nitrogen controlled atmosphere. Good solder joints without solderballing are achieved with this low residue flux.

- No microballing
- Compatible with different PCB lead-free finishing as Ni/Au, Sn, Ag, HAL and OSP, even after prior heat cycle
- Compatible with a wide range of solder mask
- Possible to use with leaded and lead-free product

## SPECIFICATIONS

Density at 20°C	0,798 - 0.806
Flash point	16°C
Dry extract, 3 H at 105°C	2 %
Halogen content	no halogen
Acid index, KOH/G mg	18

## CHARACTERISTICS

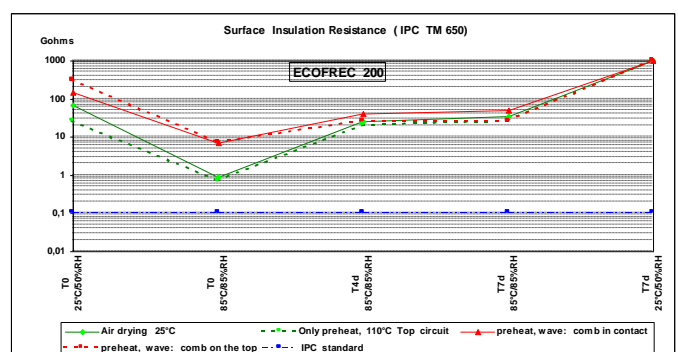
Its halogen-free activation system is eliminated after wave soldering, leaving no visible residue on the PCB.

### AUTOMATIC CONTROL - PIN POINT TESTER

Due to the absence of any residue after soldering, **ECOFREC™ 200** ensures that no electrical contact failure or “false failure” will take place during the automatic control on pin point tester.

Standards tests	Results	Procedures
Flux Classification	ORLO	ANSI/J-STD-004
SIR (IPC)	pass	ANSI/J-STD-004
Copper mirror	pass	ANSI/J-STD-004
Chromate paper	pass	ANSI/J-STD-004
Bono Corrosion test 85°C / 85% HR – 15 days	Pass: FC=0.3%	INVENTEC BRY-MO-058

Electrical performances are especially high after ageing in a humidity chamber, with a SIR value on inter digit IPC B 24 comb close to 10<sup>6</sup> Megohms under storage conditions of 21 days at 40°C, 93 % RH, 5 Volts, or 7 days at 85°C, 85 % RH, 50 Volts (IPC TM 650 2.6.3.3 Rev A).



## PACKAGING, STORAGE & SHELF LIFE

**ECOFREC™ 200** must be stored in a cool and well-ventilated area (between 5° and 30°C), in securely closed packaging. Its maximum shelf life is 18 months.

**ECOFREC™ 200** must be stored at room temperature for 12 hours before use.

Plastic drum	20L	18 months
Flux pen	10cc	18 months

## PROCESS PARAMETERS

**ECOFREC™ 200** can exclusively be applied by spraying, atomisation under air or nitrogen pressure, or with ultrasounds.

Parameters	Recommended Values
Flux Amount Deposit	40-80 g/m <sup>2</sup>
Preheating PCB Top Side	110°C maximum
PCB Bottom Side	130°C maximum
Conveyor Speed	0.8 – 1.5 m/mn
Conveyor angle	4 - 7° (7° typical)
Chip Wave Contact Time	0.5 – 1 sec
Main Wave Contact Time	2.5 – 4 sec
Solder bath Temperature	
- SnAgCu	260 – 270°C
- SnPb	245 – 255°C

Using nitrogen allows for a higher flexibility of use when the application requires to increase preheat temperature in order to reduce thermal shock, and thus to provide for a better removal of flux residues. And more especially, the nitrogen atmosphere provides for a significantly better soldering of components, regardless of their oxidation level.

This guideline is the result of laboratory test and process optimisation at production lines. This information's goal is mainly to make the flux implementation easier. However, the actual settings may vary depending on the actual products being run, the equipments, components and boards being used, etc... The optimum parameters may be slightly different from the table above.

## HSE

**ECOFREC™ 200** must be handled in a well-ventilated room, away from any flames. Fumes must be evacuated from flux and solder work stations by means of an efficient exhaust.

No issues when used as recommended.

Please refer to the Safety Data Sheet prior to use.

INVENTEC Safety Data Sheets can be found at [www.quickfds.com](http://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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