



No-clean adhesive & screen printable fluxes

PERFORMANCES

Adhesive fluxes ECOFREC™ TF37 & ECOFREC™ TF37 I allow metal-free soldering of SMDs on PCBs offering solder areas with a tin-lead alloy thickness increased to approximately 100 microns (PPT or SIPAD PCBs).

SPECIFICATIONS

| | |
|--|------------------------|
| Colour | |
| Solubility | in water in alcohol |
| Classification according ANSI/J-STD-004 | |
| Acid index (KOH/g mg) | |
| Halogen % | |
| Density at 20°C | |
| Viscosity at 20°C Pa.s | |
| <i>(Measured on BROOKFIELD RVT viscosimeter with Mobile F HELIPATH system, at 5 rpm)</i> | |

ECOFREC™ TF37

amber
not soluble
soluble
REL0
80
0
1.03
400

ECOFREC™ TF37 I

light yellow
not soluble
soluble
REL0
85
0
1.03
400

CHARACTERISTICS

Adhesive fluxes ECOFREC™ TF37 & ECOFREC™ TF37 I are high viscosity pastes made of complex blending of resins, activators and solvents. After soldering, flux residues remaining on the PCB are non aggressive and not liable to corrosion. PCB cleaning is thus unnecessary.

ECOFREC™ TF37 I has a stronger adhesive power than ECOFREC™ TF37.

PACKAGING TYPE

Plastic drum

100 g or 500 g

STORAGE AND SHELF LIFE

Adhesive fluxes ECOFREC™ TF 37 & ECOFREC™ TF 37 I must be stored in a cool area (between 5° and 30°). Shelf life is about a year long.



CONDITIONS OF USE

Adhesive fluxes ECOFREC™ TF37 & ECOFREC™ TF37 I can be applied by screen printing, using a stencil or a screen. Deposits thickness is in the range of 100 microns.

The sticky properties of adhesive fluxes ECOFREC™ TF37 & ECOFREC™ TF37 I ensure that the components will be kept in position until the alloy is reflow using an IR or convection oven or vapour phase. After printing adhesive properties can be improved after 30-60 minutes storage or after heating at 50-60°C during few minutes.

A ready-to-use, prefluxed PCB can be stored several months, away from dust. In order to make storing easier, it is recommended that a non-stick paper be placed between these PCBs.

HSE

During soldering operations, evolving vapours should be collected by an efficient exhaust system.

Please refer to MSDS before use.

Although the conformity to ROHS 2002/95CE concerns EQUIPMENT put on the market and not a component in particular, we warranty that this product contains less than 0.1% of mercury, lead, chromium VI, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE) and less than 0.01% for the cadmium, in accordance with the decision of the European Commission dated 18/08/2005, fixing the maximal concentration values.

This data is based on information that the manufacturer believe to be reliable and offered in good faith. In no event will AVANTEC 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.

FPW.SV.10253 001 - 12/12/2006

Material safety data sheet

Product

ECOFREC TF 37, 37I

Page :1/5

Version : 7

Date : 06/07/2004

Supersedes : 05/06/2003

01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION (*)

PRODUCT NAME : ECOFREC TF 37, 37I
Recommended uses : Adhesive flux for the soldering of electronic components
SUPPLIER :
Name : AVANTEC SA
Address : 20, Rue de bourgogne
BP 211
69802 SAINT-PRIEST cedex
Telephone number : 04 72 28 13 00
Telefax number : 04 72 28 13 41
Department to contact : Department Material Safety Data Sheets - TEL : 01 49 83 53 00
EMERGENCY TELEPHONE
NUMBER : INRS/ORFILA (France) : 33 1 45 42 59 59

02 COMPOSITION / INFORMATION ON INGREDIENTS

PREPARATION :
Chemical nature : Preparation with a resin and organic diacids
Hazardous constituents : Terpineol : 50-55 %
CAS : 8000-41-7
EINECS : 232-268-1
EC classification : Xi; R36/38

03 HAZARDS IDENTIFICATION

MOST IMPORTANT HAZARDS :
Adverse human health effects : Irritating to eyes and skin
Physical and chemical hazards : No particular fire or explosion hazard
Classification of the product : According to european regulations, this product is classified as :
- IRRITANT

04 FIRST AID MEASURES

Inhalation : Move the affected person to the fresh air
Skin contact : Immediately rinse with plenty of water
Eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye
(15 minutes minimum)
Consult an eye specialist if necessary
Ingestion : Rinse mouth out with water
Never attempt to induce vomiting

Material safety data sheet

Product

ECOFREC TF 37, 37I

Page :2/5

Version : 7

Date : 06/07/2004

Supersedes : 05/06/2003

Call a doctor immediately
If possible show him this sheet. Failing this, show him the packaging or label

05 FIRE FIGHTING MEASURES

Suitable extinguishing media : All extinguishing agents can be used
Specific fire fighting methods : Do not dispose of fire-fighting water in the environment
Do not breathe fumes
Cool down the containers exposed to heat with a water spray
Do not attempt to fight the fire without suitable protective equipment

06 ACCIDENTAL RELEASE MEASURES

Personal precautions : Avoid contact with skin and eyes
Environmental precautions : Do not allow product to spread into the environment
Methods for cleaning up :
- Recovery : Recover the product by scraping with a spatula or a similar instrument
Recover as much product as possible
- Cleaning/decontamination : To clean the floor or objects contaminated by this product, use :
- Ethanol
- Isopropyl alcohol
- Disposal : Do not discharge into drains
For disposal of contaminated materials refer to section 13 : "Disposal considerations"

07 HANDLING AND STORAGE

HANDLING

Technical measures : Vapour extraction at source
Precautions : Do not handle with bare hands
Work in a well-ventilated area

STORAGE

Storage conditions :
- Recommended : Store :
- at room temperature
- protected from humidity

Incompatible products : Strong oxidizing agents
Strong acids

Packaging materials :
- Recommended : Polyethylene
Polypropylene
Glass

- Not suitable : Aluminium and its alloys
Copper and its alloys

Material safety data sheet

Product

ECOFREC TF 37, 37I

Page :3/5

Version : 7

Date : 06/07/2004

Supersedes : 05/06/2003

08 EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protective equipment :

- Hand protection : Protective gloves made of latex

- Eye protection : Safety spectacles

- Skin and body protection : Protective clothing

Hygiene measures : Always wash your hands immediately after handling this product, and once again before leaving the workplace.

Do not eat, drink or smoke during use

09 PHYSICAL AND CHEMICAL PROPERTIES

Physical state : Paste

Colour : amber

Odour : characteristic

pH : Not applicable

Specific temperatures :

- Boiling : > 200 °C

Flammability characteristics :

- Flash point : Not applicable

- Auto-ignition temperature : Not determined

Oxidizing properties : Non oxidizing material according to EC criteria

Specific gravity : 1 kg/dm³

Solubility :

- in water : Practically insoluble

- in organic solvents : Miscible (in all proportions) with :

- ketones

- alcohols

Dynamic viscosity : 400 Pa.s

10 STABILITY AND REACTIVITY

Stability : Stable at room temperature

Hazardous reactions :

- Conditions to avoid : No dangerous reactions known under normal conditions of use
Refer to the technical directions

- Hazardous decomposition

products : On thermal decomposition (pyrolysis), releases :

Carbon oxydes (CO, CO₂)

Carboxylic acids

Aliphatic aldehydes

Material safety data sheet

Product

ECOFREC TF 37, 37I

Page :4/5

Version : 7

Date : 06/07/2004

Supersedes : 05/06/2003

11 TOXICOLOGICAL INFORMATION

Acute toxicity :

Terpineol:

LD 50 skin (Rabbit) :> 3000 mg/kg.

LD 50 oral (Rat) : 4300 mg/kg.

Local effects :

Fumes are irritating to the respiratory system

Irritating to skin

Eczéma possible

Irritating to eyes

12 ECOLOGICAL INFORMATION

No data available

Do not allow the product, as is, to spread into the environment

13 DISPOSAL CONSIDERATIONS

WASTE FROM PRODUCT :

Prohibition :

Discharging into rivers and drains is forbidden

Do not dispose of with domestic waste

Land-fill is forbidden

Do not bring to dump

Destruction/Disposal :

Dispose of at a licensed waste collection centre

CONTAMINATED PACKAGING :

Decontamination/cleaning :

Empty the packaging completely prior to disposal

Destruction/Disposal :

Entrust the thoroughly decontaminated packaging to a licensed waste-contractor

NOTE :

The user's attention is drawn to the possible existence of specific european, national or local regulations regarding disposal

14 TRANSPORT INFORMATION

INTERNATIONAL REGULATIONS :

RID/ADR/IMDG/IATA :

Not restricted

NOTE :

The above regulatory prescriptions are those valid on the date of publication of this sheet

However, given the possible evolution of transport regulations for hazardous materials, in case the present sheet is dating back to more than 12 months ago, it would be advisable to check their validity with your commercial agency

15 REGULATORY INFORMATION

EC LABELLING :

Mandatory labelling (self-classification) of hazardous preparations : applicable

- Symbols and danger information :

- IRRITANT (Xi)

- R phrases :

R 36/38 : Irritating to eyes and skin

Material safety data sheet

Product

ECOFREC TF 37, 37I

Page :5/5

Version : 7

Date : 06/07/2004

Supersedes : 05/06/2003

- S phrases :

S 24/25 : Avoid contact with skin and eyes

S 26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S 37 : Wear suitable gloves

NOTE :

The regulatory information given in this part only indicate the principal regulations specifically applicable to the product described in the Safety Data Sheet.

The cited basic Community texts are being updated and transcribed in national law.

Refer to all applicable national, international and local regulations or provisions.

The user's attention is drawn to the possible existence of additional provisions which complete these regulations.

16 OTHER INFORMATION

Further information:

Product for industrial use only

For more information regarding the use of this product, please refer to our technical information or contact the sales department in your region.

* Update :

This sheet was updated (refer to the date at the top of this page)

The amended headings are indicated by an asterisk (*)

This sheet complements the technical sheets but does not replace them. The information given is based on our knowledge of the product, at the time of publication. It is given in good faith.

Besides, the attention of the user is drawn to the possible risks incurred by using the product for any other use than that for which it was intended.

In no way does this exempt the user from knowing and applying all the regulations controlling his activity. He alone will take on the responsibility for taking the precautions involved by the use of the product.

The aim of all the mandatory regulations mentioned is just to help the user to fulfil his obligations regarding the use of hazardous products.

This information must not be considered exhaustive. It does not exempt the user from ensuring that other obligations than those mentioned could apply, related to the storage and use of the product, this being his sole responsibility.

End of document.

Number of pages : 5