



SOLDERING

# ECOFREC™ TF49

HALOGEN FREE TACKY FLUX  
FLIPCHIP AND REWORK SOLDERING  
LOW RESIDUE PROPERTIES

## BENEFITS

ECOFREC TF49 is a halogen free, no-clean high viscosity tacky flux designed for lead-free and leaded applications. After reflow, the residue is non-corrosive and don't need to be cleaned.

PERFORMANCE	<ul style="list-style-type: none"> <li>▪ Excellent wetting</li> <li>▪ Great performance for Ni/Au, Sn, Ag, HAL and OSP PCB finishes</li> <li>▪ Transparent, colorless flux residue</li> <li>▪ High reliability through Bono-test compliance</li> </ul>
COST	<ul style="list-style-type: none"> <li>▪ Helps to avoid pre-mature failures of your electronic assembly</li> <li>▪ No flux residue cleaning required</li> </ul>
HSE	<ul style="list-style-type: none"> <li>▪ No CMR substances</li> <li>▪ Free of halide (Fluoride, Chloride, Bromide) and halogen</li> </ul>

## FEATURES

SPECIFICATIONS	ECOFREC TF49
Appearance	Light yellow
Solubility in water	insoluble
Solubility in alcohol	soluble
Density at 20°C	1,0
Halogen content	No halogen
Viscosity (Pa.s at 20°C) (Brookfield RVT TF at 5 RPM)	300-500

## CHARACTERISTICS

CHARACTERISTICS	VALUES	METHOD
Flux Classification	ORLO	ANSI/J-STD-004
Copper mirror	Pass	ANSI/J-STD-004
Chromate paper	Pass	ANSI/J-STD-004
SIR (IPC)	Pass	ANSI/J-STD-004
Bono Corrosion test (85°C / 85% HR - 15 days)	Pass: Fc < 1%	Inventec: MO.SB.10029

## PROCESS RECOMMENDATION

The best process will depend on factors such as operating conditions, equipment, board or component design. Our team is ready to advise you.

ECOFREC TF49 can be applied by dispensing, dipping, brush or stencil printing. The tacky properties of ECOFREC TF49 ensure that components are kept in position until the alloy is reflowed.

A variety of reflow methods can be used, these include soldering irons, hot gas and hot bar devices, IR or convection oven or vapour phase.

## CLEANING POST SOLDERING

This product is a no-clean solder flux, so cleaning is not required to meet IPC standards. The chemistry is specially designed so that any remaining flux residue is chemically inert and will not impact your assembled board or packaging under normal conditions. However, when cleaning is desired or required (e.g., high reliability assembly or to improve conformal coating adhesion), the flux residue can be easily removed with INVENTEC's own formulated flux cleaners.

*Inventec has over 60 years' experience in high-tech cleaning for aqueous and solvent based systems. Our solder materials are aligned with our cleaning solutions, which guarantees excellent cleaning.*

PROCESS TYPE	PCBA DEFLUXING SOLUTIONS
Manual	Quicksolv™ DEF90, Quicksolv™ DEF70, Promoclean™ TP61
Aqueous (Immersion or spray)	Promoclean™ DISPER 607, Promoclean™ DISPER 707, Promoclean™ DISPER 800
Co-solvent	Topklean™ EL 80 + Promosolv™ rinsing solvents
Mono-solvent (vapor phase)	Promosolv™ 70ES, Promosolv™ 70IS

Other products available, depending on specific customer requirements. Also check our maintenance cleaning solutions.

## PACKAGING, STORAGE & SHELF LIFE

- To ensure the best product performance, the recommended storage temperature range is between 20°C to 30°C / 68°F to 86°F
- For an optimal preservation, store cartridges and syringes in a vertical position, tip downwards.
- Shelf-life is 18 months for jar, cartridges & syringe packaging

### AVAILABLE PACKAGING



JAR  
100g & 500g



CARTRIDGE  
300g



SYRINGE  
10g / 30g

Please verify the packaging details, including volume and availability, with your sales representative, as they may vary depending on the production facility where the product is manufactured.

## HEALTH, SAFETY & ENVIRONMENT

ECOFREC TF49 is **NOT** a **GREENWAY** product. Although fully in line with safety & environmental regulations, this product doesn't match our strict criteria to be labelled as a Greenway product. More info on our Greenway concept via [this link](#).



### LOOKING FOR A MORE SUSTAINABLE SOLUTION?

#### GREENWAY ALTERNATIVE

- We currently don't have a Greenway alternative but our target is to develop one in the near future. In case you want us to prioritize the development of a Greenway alternative, do not hesitate to contact us.

No issues when used as recommended. Product must be handled in a well-ventilated room, away from any flames. Fumes must be evacuated from flux and solder workstations by means of an efficient exhaust. Safety glasses and gloves should always be worn when handling the flux.

In accordance with the Annex II of Directive 2011/65/UE (RoHS), including its amendments, we certify that this product does not contain quantities above 0.1% of Hg, Pb, Cr VI, PBB, PBDE, DEHP, BBP, DBP, DIBP and above 0.01% of Cd. INVENTEC PERFORMANCE CHEMICALS also fulfils its direct obligations under the REACH and Conflict Mineral regulations.

Please refer always to the Safety Data Sheet (SDS or MSDS) prior to use. Our SDS can be downloaded at [www.quickfds.com](http://www.quickfds.com). We will request to provide your email address, so we can automatically send you a new version of the SDS when a future update would occur.

## TECHNICAL SUPPORT & FREE-OF-CHARGE TESTING

Inventec has a worldwide dedicated Technical Support team to help you along the various stages of our cooperation.

Depending on your request, we provide online or onsite support

- to select the right product based on your specific needs.
- to assist you in your product qualification process.
- to guide you with the initial set up of your process at all your worldwide manufacturing facilities.
- to provide fast response on technical issues which could occur at any time during mass production.

When prior cleaning is required, customers are also welcome in our CLEANING CENTERS to see the process in action and to get convinced by our solutions. We cover water and solvent based processes.

Inventec is unique in the world by developing not only soldering materials but also cleaning and coating solutions. These materials are very closely linked with each other from a process point of view. Talking to our Technical Team, who understands very well these 3 different product groups, will help you greatly to overcome technical challenges within your overall process.

Contact our technical support via [contact@inventec.dehon.com](mailto:contact@inventec.dehon.com) or your local sales representative.

## ABOUT INVENTEC

Inventec is a global provider of SOLDERING, CLEANING, COATING, COOLING materials for Electronic, Semiconductor and Industrial applications. For over 60 years we have shown leadership in innovation by putting HEALTH IMPACT, SUSTAINABILITY and RELIABILITY at the core of our product development.

With ISO 9001 & 14001 production sites in France, Switzerland, USA, Mexico, Malaysia and China we can guarantee a smooth and cost-effective supply chain.

We supply to many industries but the excellent performance of our products in applications which demand high reliability, leads us to focus especially on the AUTOMOTIVE, AEROSPACE, SEMICONDUCTOR, ENERGY and MEDICAL industry.

[www.inventec.dehon.com](http://www.inventec.dehon.com)



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CLEANING  
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This data is based on information that the manufacturer believes to be reliable and offered in good faith. In no event will INVENTEC PERFORMANCE CHEMICALS 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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