



SOLDERING

ECOFREC™ 205

SOLVENT BASED NO-CLEAN LIQUID FLUX
WAVE & SELECTIVE SOLDERING
EXCELLENT WETTING & HIGH RELIABILITY

BENEFITS

ECOFREC™ 205 is based on our new generation solder flux technology, developed to provide best wetting properties regardless of the selected board finishes. Excellent soldering results within lead-free as well as leaded wave- and selective soldering processes are achieved.

PERFORMANCE	<ul style="list-style-type: none"> ▪ Excellent wetting & through-hole filling ▪ Great performance for Ni/Au, Sn, Ag, HAL and OSP PCB finishes ▪ Excellent soldering results – lowest levels of solder-ball formation ▪ High SIR values and passes BONO corrosion test
COST	<ul style="list-style-type: none"> ▪ Helps to avoid pre-mature failures of your electronic assembly ▪ No flux residue cleaning required ▪ Highest grade alcohol formula, providing a consistent & reliable process
HSE	<ul style="list-style-type: none"> ▪ No CMR substances ▪ Free of halide (Fluoride, Chloride, Bromide) and halogen

FEATURES

SPECIFICATIONS	ECOFREC 205
Appearance	Colorless liquid
Solid content	4.2
Acid index (mg KOH/g)	33 -37
Density at 20°C	0,795 - 0,811
Halogen content	No halogen
Flash point	16°C

CHARACTERISTICS

CHARACTERISTICS	VALUES	
Flux Classification	ORLO	ANSI/ J-STD-004B
SIR (IPC)	Pass	ANSI/J-STD-004B
Copper mirror	Pass	ANSI/J-STD-004B
Chromate paper	Pass	ANSI/J-STD-004B

PROCESS RECOMMENDATION

ECOFREC™ 205 is suitable for spray, brush, foam or dipping processes.

PARAMETER	RECOMMENDED VALUES
Flux amount deposit	40-80 g/m ²
Preheating PCB top side PCB bottom side	120°C/248°F maximum 145°C/293°F maximum
Conveyer speed	0,8 – 1,8 m/mn
Conveyer angle	4-7°(7° typical)
Abandon time between prints	>2 hours
Chip wave contact time	0,5-1 sec
Main wave contact time	2,5-4 sec
Solder bath temperature	Depending on alloy
SnAgCu	260-270°C/500-518°F
SnPb	245-255°C/473-491°F

- Both laboratory testing and onsite product implementation at customers, lead to the recommended process settings. However, the actual settings may vary depending on manufactured assemblies, process equipment, components and boards being used, etc, ...
- In most selective or wave soldering equipment, the flux is kept in a closed system, so solvent loss by evaporation should not occur. For this reason regular analysis of solid content is not required.

CLEANING POST SOLDERING

ECOFREC 205 is a no-clean solder flux, therefore cleaning is not required to meet IPC standards. Due to our innovative chemistry, any remaining flux residue is chemically inert and will not impact your assembled boards or packages under normal conditions. However, as cleaning might be required (e.g. high reliability assembly or due to improved conformal coating adhesion), the flux residue can easily be removed with INVENTEC's own formulated flux cleaners.

Inventec has more than 40 years experience in high-tech cleaning for aqueous and solvent based systems. Our solder materials are aligned with our cleaning solutions, providing you a guaranteed cleaning result with our materials.

PROCESS TYPE	PCBA DEFLUXING SOLUTIONS
Manual cleaning	Quicksolv™ DEF90 EL
Aqueous system (Immersion or spray)	Promoclean™ DISPER 607
Co-solvent system	Topklean™ EL 20P or EL 20A + HFE bases solvents
Mono-solvent (Azeotropic)	Promosolv™ 70ES

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

PACKAGING, STORAGE & SHELF LIFE

- To ensure the best product performance, recommended storage temperature range is in-between 20°C to 30°C.
- Shelf-life is 18 months.



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HEALTH, SAFETY & ENVIRONMENT

No issues when used as recommended.

Use in well ventilated areas. 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 contains 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. 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 different 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 you 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 or your local sales representative.

ABOUT INVENTEC

Inventec is a global provider of SOLDERING, CLEANING & COATING materials for Electronic, Semiconductor and Industrial applications. For over 40 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



S O L D E R I N G • C L E A N I N G • C O A T I N G

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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