



**STANNOL**



SOLDER WIRES

SOLDER PASTES

**FLUXES**

SOLDER BARS

SOLDERING EQUIPMENT

MEASUREMENT AND TESTING SYSTEMS

CONFORMAL COATINGS

ACCESSORIES

# FLUXES

FOR ELECTRONICS MANUFACTURING



## WE HAVE THE RIGHT FLUX FOR EVERY APPLICATION.

IN SOFT-SOLDERING, A FLUX IS USED IN ORDER TO SAFELY REMOVE OXIDES AND OTHER CONTAMINANTS. THIS ENABLES A RELIABLE SOLDER CONNECTION.

The right choice of flux for wave and selective solder processes in electronics manufacturing is determined by different factors. What is essential in one manufacturing environment may be of much less importance in another. Our fluxes are just as multi-faceted as our customers' requirements. Be it a water-based or a conventional solvent-based flux, with or without resin, with or without certain substances due to special material combinations. Since 1879 the range of available fluxes for reliable soldering has constantly grown in line with the topical requirements. We would like to present you with this brochure some of our most successful flux products. Many other special fluxes from our portfolio can be demonstrated on a one-on-one basis.

## EF-SERIES FLUXES

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The **EF series** cover many of the manufacturing industry's requirements for liquid soldering fluxes by providing versatility and a large application area. The EF series has been developed for application with modern spray fluxing systems. Since the series encompasses fluxes with different activation strengths, it gives you the chance to select the optimum activation according to soldering and reliability requirements. While e.g. low activation may be selected for a full nitrogen tunnel wave soldering system, soldering with older machines and on difficult surfaces requires a higher activation level.

Apart from the activity and the resulting soldering performance, the reliability of No-Clean fluxes and their residues after soldering are important factors for the selection of the right flux for the production process.

While the EF series is completely free of halides, it offers types with or without resin, with only traces of activator, up to broadband fluxes that fulfil all the requirements of current electronics manufacturing systems.



All of these fluxes ensure a high to very high degree of electrical safety with varying but low amounts of residues on soldered printed circuit boards.

In comparison with **EF330** the flux **EF350** with its small addition of resin raises the insulation resistance of the flux residues and concurrently reduces the formation of solder beads. The good activation of the flux EF350 provides a wide process window and can therefore obtain good results also in a selective soldering process.

The fluxes **EF200**, **EF210** and **EF270** show less activation and are well suited for soldering in nitrogen atmosphere as well as on some air soldering equipment, where they leave less residues on the PCBs due to their lower amount of solids.

All common Stannol No-Clean fluxes with small amounts of solids may be applied reproducibly in minor amounts with every common spray method on the market.

## NO-CLEAN FLUXES

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No-Clean means that the flux residues can remain on the board without having to be cleaned. No corrosive reactions at the solder joints are to be expected. Using a strongly activated flux for soldering may require to remove the flux residues after soldering. Not

doing so can lead to corrosion at and around the solder joint over time. No-Clean solder wires leave electrically safe residues which usually can remain on the assembly.

## SPECIAL FLUXES

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**500-6B** is an active flux with high priority on the electrical safety of its residues. The solids contain activators and a fairly high amount of rosin. This results in a higher residue level after soldering, but this is often accepted due to its very high electrical safety and insulation resistance. The flux 500-6B can be applied with all commonly installed fluxing systems.

The flux **500-17/1** can be perfectly used for pre-tinning of enameled copper wires at higher temperatures as well as different other delicate soldering applications. It has been developed especially for dip soldering and its high amount of solids ensures that there is always enough active flux left at the component to be soldered, even at elevated preheat temperatures or high temperatures of a dip-solder bath. There is enough activity to achieve an even pre-tinning and good soldering results.



Our fluxes are available in standard packaging sizes of 2.5 litres, 10 litres and 25 litres.

## WATER-BASED FLUXES

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Due to growing environmental concerns in the industry, water-based fluxes become more important. On suitable soldering equipment, the VOC free, water-based fluxes **WF300** and **WF203** facilitate reliable soldering results.

The flux **WF300** is available in spraying and foaming variants. With a comparatively high solid content for a spray flux, the applicable flux volume can be reduced considerably and still results in reliable soldering. Therefore you can reduce the required amount of energy for drying the board prior to soldering as well as the volume of required flux.

The newly developed flux **WF203** is very well suited for wave soldering equipment with high energy input in pre-heating. It doesn't tend to form beads, but this depends on many different factors like the specifics of the soldering machine and the solder resist. Introducing water-based fluxes requires a comprehensive assessment of the application areas. Our application specialists will gladly provide expert advice.

### SOLID CONTENT

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This signifies the share of solid components. Apart from the activations there are also some other additives having a positive impact on certain flux characteristics.

### VOC CONTENT

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The VOC content (Volatile Organic Compounds) defines the percentage of highly volatile organic solvents in the flux. Fluxes with water as a solvent are called VOC free.

## OVERVIEW

FLUX	DIN EN ISO 9454-2	DIN EN 61190-1-1	APPLICATION METHOD*	VOC CONTENT	SOLID CONTENT %
EF200	2.2.3.A	ORL0	S	High	2.0
EF210	2.2.3.A	ORL0	S	High	2.1
EF270	2.2.3.A	ORL0	S	High	2.7
EF330	2.2.3.A	ORL0	S, F	High	3.3
EF350	2.2.3.A	ORL0	S, F	High	3.5
WF203	2.1.3.A	ORM0	S, F, D, B	Free	3.5
WF300F	2.1.3.A	ORM0	F	Free	4.6
WF300S	2.1.3.A	ORM0	S	Free	4.6
500-6B	1.1.3.A	ROL0	S, F, D, B	High	6.0
500-17/1	1.1.3.A	ROL0	S, F, D, B	High	15.0
500-3431BF	2.2.3.A	ORL0	S, F	High	4.4
900-7/1H	2.1.2.A	ORM1	S, F	High	1.7
HW139	2.2.3.A	ORM0	S	Low	2.5
X33-08i	2.2.3.A	ORL0	S, F	High	2.0

\*Application methods: **S** spraying / **F** foaming / **D** dipping / **B** brushing

## PACKAGE SIZES

FLUX	2.5 LITRES	25 LITRES
EF200	Part-No. 164025	Part-No. 164024
EF210	Part-No. 164149	Part-No. 164150
EF270	Part-No. 164159	Part-No. 164157
EF330	Part-No. 164156	Part-No. 164155
EF350	Part-No. 164151	Part-No. 164152
WF203	Part-No. 164166	Part-No. 164167
WF300F	Part-No. 830389	Part-No. 830390
WF300S	Part-No. 830391	Part-No. 830392
500-6B	Part-No. 164014	Part-No. 164016
500-17/1	Part-No. 164037	Part-No. 164038
500-3431BF	Part-No. 164153	Part-No. 164147
900-7/1H	Part-No. 158010	Part-No. 158007
HW139	Part-No. 164145	Part-No. 164146
X33-08i	Part-No. 830378	Part-No. 830381

### MORE FLUXES ARE AVAILABLE

This brochure shows a very limited range of products and we only focused on our top selling products. Our flux portfolio in total encompasses more than 100 different products.

You will find more products as well as a new and innovative product selector tool at [www.stannol.de](http://www.stannol.de). Here you have the opportunity to refine the product choice according to different criteria.





# STANNOL

## TRADITION AND INNOVATION

SOLDERING TECHNOLOGY SINCE 1879 – MADE IN GERMANY



SOLDER WIRES



FLUXES



SOLDERING IRONS



SOLDER PASTES



ACCESSORIES



SOLDER BARS



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