STANNOL

PIONEERS OF SOLDERING

SOLDER WIRE	SOLDER PASTE	FLUX	SOLDER BARS
GREENCONNECT	SELECTIVE STARTER KIT	RECYCLING AND DISPOSAL	TEST AND ANALYSIS SERVICE

SOLDERING MATERIALS

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The New Flux-Ex Cleaners

- **Flux-Ex Pre**
  efficient cleaning **before** soldering
- **Flux-Ex Post**
  optimum cleaning **after** soldering
- **Flux-Ex Post Power**
  extra powerful cleaning **after** soldering
- **Flux-Ex Glue**
  specialist for **removing** adhesives and thermal pastes
- **Flux-Ex Oven**
  the all-round talent for **cleaning** soldering systems

The right product for every application

The new Flux-Ex series includes broadband and speciality cleaners that are perfectly tailored to their respective areas of application – e.g. for cleaning before the soldering process or for removing residues after soldering. All cleaners are delivered as a ready-to-use-mix.

Do you have any questions about our products?

Our application engineers are happy to assist you. Contact us via the QR code – there you will find the right contact person for you.

greenconnect – the sustainable product line from Stannol

Stannol looks back on a long tradition in solder production: For more than 140 years, we have been combining experience and progress in our products. In addition to its high quality standard, Stannol has also been committed to sustainable and ecological manufacturing for years: Under the name greenconnect, the company offers a complete product range that focuses on sustainability and fairness.

In the past, only the criteria of quality, price and delivery time counted, especially when purchasing tin. However, due to the strong demand for raw materials, working and living conditions in the mining areas are largely inhumane. The environment also suffers greatly from the uncontrolled and partly illegal mining of natural resources.

With our greenconnect products, we enable our customers to take a step further towards sustainable and ecological manufacturing.

The five areas of greenconnect

- **Solder bars** (Fairtin)
- **Solder wires** (Fairtin)
- **Solder paste** (metal powder from Fairtin) and
- **Fluxes** (made from renewable raw materials and/or water-based)
- **Recycled packaging materials** for all products (reels made of 100 percent recyclate, packaging and filling materials consisting of recycled material such as paper)

Fairtin solder – environmentally friendly, sustainable and fair

The solder wires, solder pastes and solder bars from our greenconnect range all carry our Fairtin label. This means that primary tin from a guaranteed sustainable supply chain and from certified producers in emerging countries is selected for these products. Alternatively, solders made from high-purity secondary raw materials sourced from European production are used. These materials are in no way inferior to solders made from primary tin in terms of quality, purity and workability.

As proof of your commitment, you will receive a personalised, batch-related certificate on demand.

For solder from our greenconnect range, we use primary and secondary raw materials from companies that not only comply with international environmental standards, but also take wide-ranging protective measures for their employees and refrain from using child labour."

(Marco Dörr, Managing Director of Stannol GmbH & Co. KG)

For Fairtin products, tin is sourced from producers who

- pay attention to the protection of the environment,
- respect international and national rights,
- fulfil their social responsibility for employees and local people – for example, by ensuring fair wages and adequate occupational health and safety measures,
- work against child labour, and
- act transparently.

Flux – bio-ethanol instead of IPA

In our greenconnect bio-fluxes, the previous main ingredient isopropanol (IPA) is replaced by bio-ethanol. Bio-ethanol is based on renewable raw materials such as food waste and can be produced completely without fossil fuels via a fermentation process. This results in a significantly better CO_2 balance.

Water-based fluxes

In addition to our organic fluxes, we also offer environmentally friendly water-based fluxes. These are VOC-free and enable CO_2 savings of around 90 percent compared to alcohol-based fluxes. The non-flammable formulations are also easier to store and pose fewer health risks.

No need for requalification

The high quality standards of our own products ensure that some greenconnect materials can be used in the respective manufacturing process without the need for costly requalification.

Our most important greenconnect products include:

- Solder wire Kristall 600
- Solder wire Kristall 605
- Solder wire Kristall 611
- Solder paste SP2200
- Solder paste SP6000
- Flux EF350 Bio
- Flux EF160 Bio PV
- Flux EF180 Bio PV
- Flux EF200 Bio PV
- Flux SF1000 Bio
- Flux AK-1 Bio
- Flux WF130
- Flux WF131
- Flux WF300S

On request, every alloy in our range can also be supplied as Fairtin version. Further information on our greenconnect products can be found in this catalogue under the respective product category as well as in our separate greenconnect catalogue.

Solder Pastes

In electronics, solder pastes are used in reflow soldering systems and for repair soldering. Stannol manufactures lead-containing and lead-free solder pastes in various alloys, particle sizes and packaging for a wide range of applications and fields of use. Specially developed for lead-free use, we offer silver-containing and silver-reduced solder pastes.

Reliable and Scalable Solder Paste Production at Stannol

Stannol stands for precision and quality in solder paste manufacturing. Our production process is defined by strict process control, the meticulous selection of high-grade raw materials, and an extensive testing regime. Each batch undergoes comprehensive chemical and physical evaluations—including viscosity, printing behaviour, wetting, activity, and performance under temperature influence. These parameters are assessed in accordance with national and international standards and specifications. Sensitive filling procedures are carried out in controlled environments by trained professionals, ensuring consistently high product quality and scalable production—from laboratory scale to full industrial manufacturing.

A product overview of our most important solder pastes can be found with our product selector. Based on various criteria, the selector can be used to generate an individual selection of suitable Stannol products. Basic selection criteria are, for example, the soldering process used and the desired alloy or flux properties. In addition, special criteria such as reduced dross formation or cost reduction are also available. Detailed explanations of the individual selection criteria provide further assistance. Of course, in addition to the product selector, our team of application engineers is also available to provide you with individual advice on selecting the right product – we would be happy to do so at an individual meeting on site.

Solder Paste SP6000

The solder paste **SP6000** is part of Stannol's sustainable greenconnect product line. The special feature: With SP6000, more than 85 percent of CO_2 emissions can be saved compared to conventional solder pastes mainly through the use of recycled solder. The solder paste was developed for use with the alloy TSC305 (Sn96.5Ag3Cu0.5) as well as for cost-saving use with low silver content with the alloy TSC105 (Sn98.5Ag1Cu0.5). With SP6000, a very good first print is possible even after a long period of printer downtime. The flux, which is classified as REL0, also convinces with an uncompromising wetting quality on all known lead-free PCBs and component coatings in both air and nitrogen atmospheres. SP6000 leaves exceptionally little residue, which is also transparent and non-corrosive. SP6000 is available for the fine pitch range in particle size 4.

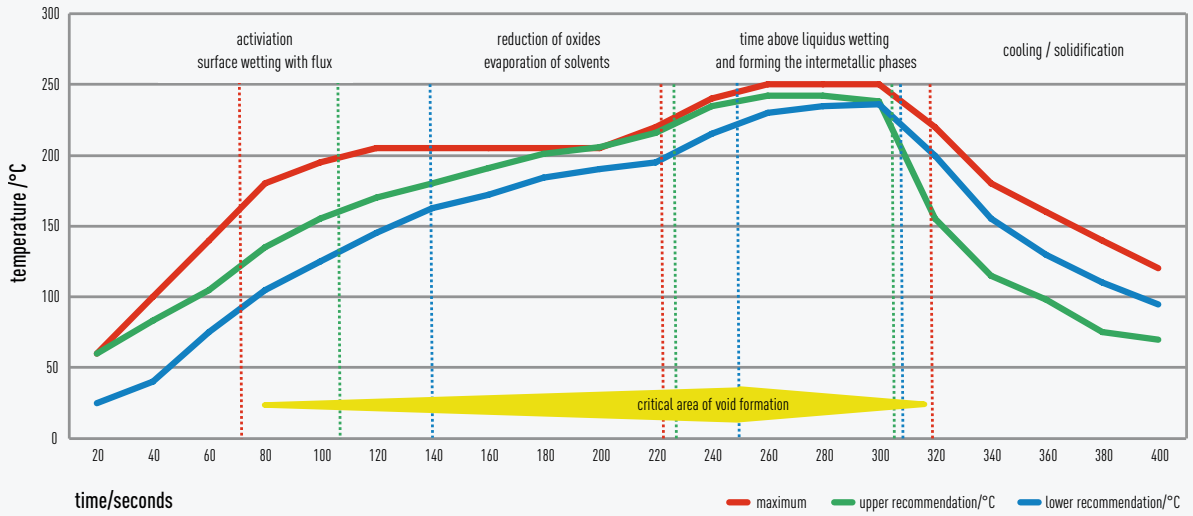
With solder paste SP6000, more than 85 percent of CO_2 emissions can be saved.

Ideal Soldering Profiles

Newly developed solder pastes can often be easily integrated into existing processes. Nevertheless, depending on the PCB and component configuration, it may be necessary to make minor changes to the temperature profile to achieve the desired performance of the flux. As a good starting point, the middle of the process window at 25 °C for 40 to 60 seconds above the melting point (liquidus) is satisfactory and generally gentle on the components.

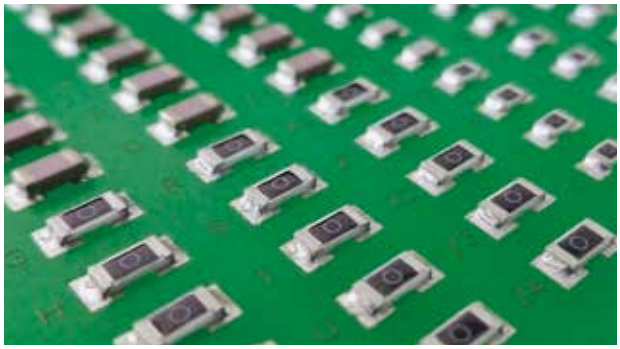
For special requirements, for example in vapour phase systems, with critical components or demanding PCB designs, an accelerated linear profile can also be useful. Please contact us for optimisation – our experienced application engineers will be happy to support you.

Recommended temperature profile for solder paste series in TSC305 (Sn96.5Ag3.0Cu0.5)



Lead-free Solder Paste

The No-Clean solder paste **SP2200** was developed for use with lead-free alloys in stencil printing. Besides the long open time, this solder paste shows good printing results even after longer interruptions directly in the first print. SP2200 is classified according to L0. This activation level provides good wetting on all surfaces used in today's electronics while maintaining a high electrical safety of the residues. The small amounts of residues after the reflow process are transparent and do not need to be removed. SP2200 is also available as greenconnect version.



Minimal amount of residues at highest electrical safety are the highlights of our latest and future oriented paste generations.

Lead-containing Solder Paste

Stannol **SP1200** solder paste has been developed for use with the lead containing alloy Sn62Pb36Ag2 as standard alloy. It contains a highly active type L No-Clean flux. With a special formula for excellent wetting, it meets the requirements of high volume production. The wetting properties have been optimised for all known PCB and component coatings. The small amounts of residue after reflow are electrically safe and do not need to be removed.

Dispensable Solder Paste

Using the flux system of **SP6000**, we have developed the dispensable greenconnect solder paste SP6000D. Here too, more than 85 percent of CO_2 emissions can be saved compared to conventional solder pastes.

With the alloy TSC305 in particle size type 4 (20 to 38 µm), it can be applied to most dispensing systems available. SP6000D also features high tackiness for use on high-speed assembly equipment.

No-Clean Solder Paste SP6000

The No-Clean solder paste **SP6000** TBS04 (TBS = Tin, Bismuth, Silver) with the composition Bi57.6Sn42Ag0.4 is a lead-free, low-temperature solder paste. It is used in applications that require lower peak temperatures during the reflow process. Today, primarily lead-free, high-tin alloys such as TSC305 (Sn96.5Ag3.0Cu0.5, 221 to 223°C) are used. These lead-free alloys require processing temperatures that are 30 to 40 K higher than those of lead-containing solders. Not all components in the soldering process can withstand these higher temperatures without damage. Additionally, newer applications, such as in the LED sector (optical electronics), require lower maximum temperatures during soldering. The alloy used in this solder paste Bi57.6Sn42Ag0.4 has a melting range around 140°C and can therefore be safely and reliably remelted in a reflow oven at a maximum temperature of 170°C to 180°C. With a silver content of 0.4%, this alloy offers significantly higher long-term reliability compared to the eutectic BiSn alloy. Other benefits include lower reflow oven temperatures, reduced wear on equipment, and lower energy costs.

Solder Pastes Overview

NAME	ALLOY	CLASS [1]	MELTING RANGE	PARTICLE SIZE	METAL CONTENT
SP1100	Sn62Pb36Ag2	ROM1	179 °C	3 (25-45 µm)	90 %
SP1200	Sn62Pb36Ag2	REL1	179 °C	3 (25-45 µm)	90 %
SP2100	Sn95,5Ag4Cu0,5	REL1	217–223 °C	3 (25–45 µm)	88 %
SP2100	Sn95,5Ag4Cu0,5	REL1	217–223 °C	4 (20–38 µm)	88 %
SP2200	Sn95,5Ag4Cu0,5	REL0	217–223 °C	3 (25–45 µm)	89 %
SP2200	Sn96,5Ag3Cu0,5	REL0	217–220 °C	3 (25–45 µm)	89 %
SP2200	Sn99Ag0,3Cu0,7	REL0	217–227 °C	3 (25–45 µm)	89 %
SP2200	Sn99Ag0,3Cu0,7	REL0	217–227 °C	4 (20–38 µm)	89 %
SP2200	Sn96,5Ag3Cu0,5	REL0	217–220 °C	4 (20–38 µm)	89 %
SP2300	Sn96,5Ag3Cu0,5 [2]	REL0	217–220 °C	5 (15–25 µm)	89 %
SP2500	Sn96,5Ag3Cu0,5 [2]	REL0	217-220 °C	3 (25–45 µm)	89 %
SP2500	Sn99Ag0,3Cu0,7	REL0	217–227 °C	3 (25–45 µm)	89 %
SP2500	Sn96,5Ag3Cu0,5 [2]	REL0	217–220 °C	4 (20–38 µm)	89 %
SP6000	Sn96,5Ag3Cu0,5	REL0	217–220 °C	4 (20–38 µm)	89 %
SP6000 TBS04	Bi57,6Sn42Ag0,4	REL0	138–140 °C	4 (20–38 µm)	90 %

SOLDER PASTE FOR DISPENSING					
SP2200D	Sn96,5Ag3,0Cu0,5	REL0	217-220 °C	3 (25-45 µm)	87 %
SP6000D	Sn96,5Ag3,0Cu0,5	REL0	217-220 °C	4 (20-38 µm)	88 %
SP6000D TBS04	Bi57,6Sn42Ag0,4	REL0	138–140 °C	4 (20–38 µm)	87 %

1 ccording to J-STD-005 | 2 Anti-voiding formulation

Our solder pastes are available in standard containers as 500 g can, 6 oz cartridge and 12 oz cartridge – we are happy to support you with choosing the right product.

Selective Starter Kit

The Selective Starter Kit contains perfectly matched products for time-saving and simple set-up as well as reliable operation of all selective soldering systems for lead-free soldering processes.

The Selective Starter Kit has been composed with decades of experience in selective soldering processes, partly with specially developed products, partly with proven fluxes, taking into account the most common system technology and tool configurations. The use of high-purity metals, manufactured according to ISO 9453 or analogously, ensures compatibility with all soldering processes. The use of high-purity raw materials also has a positive effect on throughput and soldering defect minimisation. The flux SF1000 Bio with its proven use in the automotive sector is an ideal selective flux to achieve safe solder joints in combination with electrically highly safe residues. In addition to its very wide process window in preheating, it also offers low residues and significantly minimises the cleaning effort.

Available Alloys for the Selective Starter Kit

Lead-Free Ecoloy Series	Ecoloy TSC305
Composition	S-Sn96,5Ag3Cu0,5
Melting point	217-220 °C

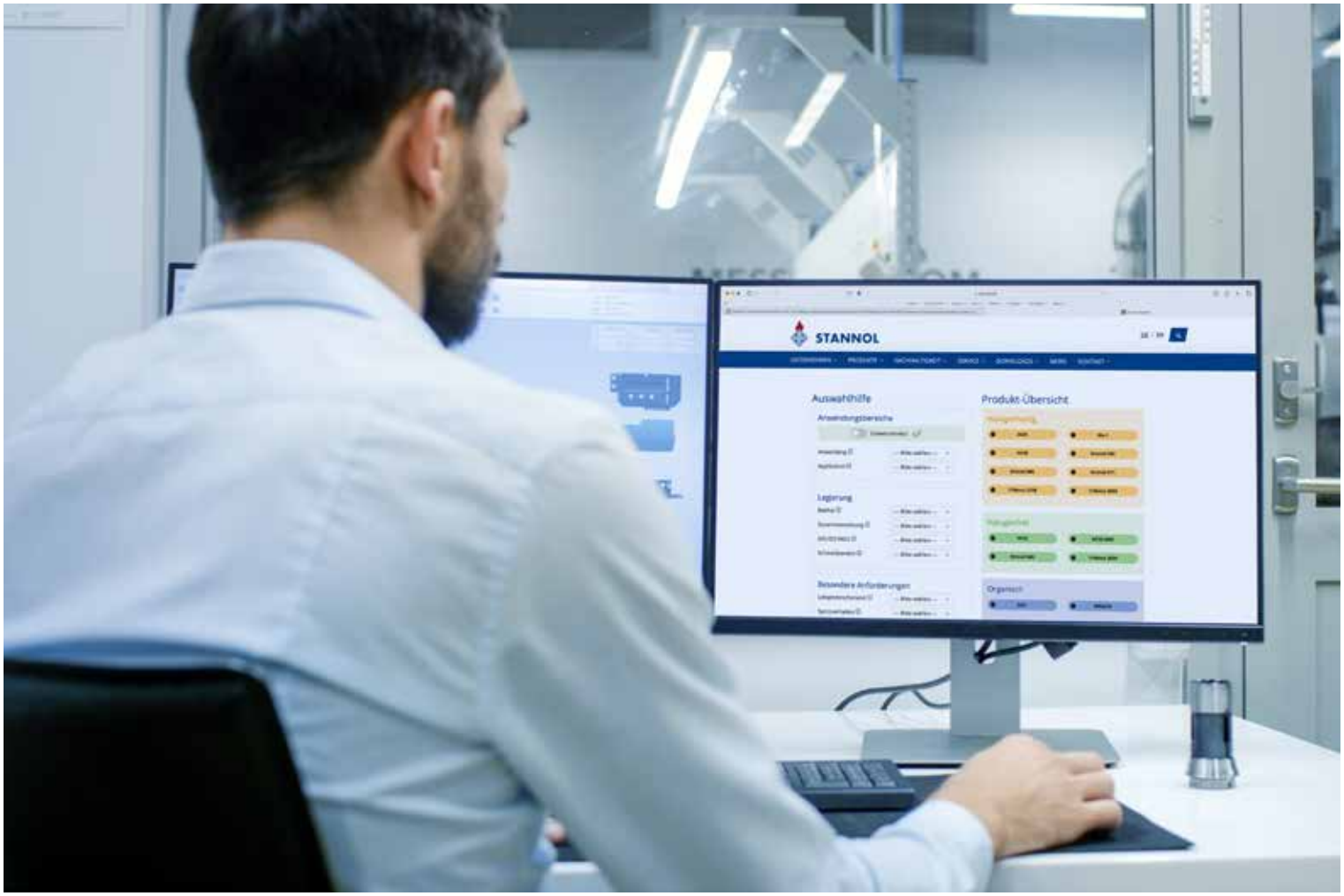
Lead-free micro-alloyed	Flowtin TSC305
Composition	S-Sn96,5Ag3Cu0,5*
Melting point	217-220 °C

Lead-free micro-alloyed	SN100C™
Composition	Sn99,3Cu0,7NiGe
Melting point	227 °C

***** According to ISO 9453:2014 or internal specifications, additionally doped with micro alloy additives <0.05%.

Content of the Selective Starter Kit

- **10 kg lead-free solder as triangular bars** (different alloys available)
- **1 litre SF1000 Bio selective flux**
- **4 kg solid wire** (in chosen composition with 2.0 mm diameter)
- **container** (for proper disposal/return of solder waste)
- **technical advice on site** (for joint determination of the ideal soldering parameters)



Stannol Product Selector

Stannol manufactures more than 2,200 different versions of solder wires and around 100 different fluxes. In order to give you a better overview of our products and to simplify the selection process, we have developed our innovative product selector. This offers a comprehensive overview of our most important solder wires, solder bars, solder pastes and fluxes on our website.

Based on various criteria, the selector can be used to generate an individual selection of suitable Stannol products. Basic selection criteria are, for example, the soldering process used and the desired alloy or flux properties. In addition, special criteria such as reduced dross formation or cost reduction are also available. Detailed explanations of the individual selection criteria provide further assistance.

Of course, in addition to the product selector, our team of application engineers is also available to provide you with individual advice on selecting the right product – we would be happy to do so at an individual meeting on site.

Solder Wires

Stannol manufactures a wide range of solder wires for different applications and uses. Solder wires can be flux filled or solid. The soldering process requires a flux to remove oxides and other impurities and to create a safe solder joint. In flux-filled solder wires, the flux is already contained in the right quantity. Depending on the soldering task, different fluxes are used. The selection of a suitable alloy also plays an important role in the reliability of a solder joint. Please refer to the table on page 9 for the different alloys.

A product overview of our most important solder wires can be found with our product selector. Based on various criteria, the selector can be used to generate an individual selection of suitable Stannol products. Basic selection criteria are, for example, the soldering process used and the desired alloy or flux properties. In addition, special criteria such as reduced dross formation or cost reduction are also available. Detailed explanations of the individual selection criteria provide further assistance. Of course, in addition to the product selector, our team of application engineers is also available to provide you with individual advice on selecting the right product – we would be happy to do so at an individual meeting on site.

Halogen-containing Fluxes

It can be chosen between halogen-containing and halogen-free fluxes. Fluxes with a higher activity are usually halogen activated. As standard, Stannol offers various halogen-containing fluxes that can be used as No-Clean products in the electronics industry.

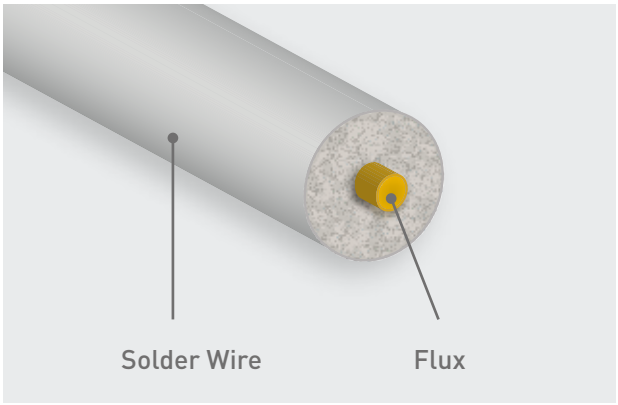
If transparent residues are required, the choice should be Stannol's proven **Kristall series**. These fluxes have been developed to leave hardly any visible residues on PCBs.

The greenconnect fluxes **Kristall 605** and **Kristall 611** are characterised by their particularly low spitting behaviour, similar to our Trilence series. Kristall 605 is classified as REL1, Kristall 611 as REM1. Both solder wires are offered in the alloys Flowtin and SN100CTM. These alloys are gentle on the soldering tips, which considerably increases their service life.

The flux used in our **HS10** solder wire is a rosin-based flux that has been tried and tested for decades. With HS10, short wetting times are achieved on common surfaces. The flux is suitable for hand soldering as well as for fast cycle times in automated soldering.

Our flux **2630** offers the highest activity of a flux in a solder wire. It is used for surfaces that are difficult to solder and for larger cross-sections.

Stannol has taken a completely new approach in developing the **Alu 1** solder wire for soldering on aluminium: non-toxic activators have been combined to enable aluminium to be joined to other materials. The residues are non-corrosive and do not need to be removed.



An important component of solder wires is the flux, which plays a decisive role in the removal of oxides from the metal surfaces to be soldered. The Stannol range of solder wires is manufactured as a standard with one flux core.

Halogen-free Fluxes

Halogen-free fluxes are suitable when halogen-containing products cannot be used in manufacturing and a higher electrical safety of the residues is required. These fluxes offer lower activity compared to the halogen-containing ones.

The greenconnect flux **Kristall 600** is a halogenide-free variant of the proven Kristall series from Stannol. In addition to the transparent residues and the good activity, the tendency to spit at higher soldering temperatures has been further reduced with this innovative flux.

The flux contained in **HF32** combines a good activity with a very high electrical safety of the residues on the PCB in an excellent way. HF32 can be perfectly used for hand soldering.

Organic Fluxes

In addition to solder wires for electronics, Stannol also offers solder wires with special fluxes that have been developed especially for surfaces that are difficult to solder. These include, for example, solder wires with water-washable residues.

S321 is especially suitable for soldering metal and sheet metal goods. Tin-plated surfaces can be processed as well as brass or iron.

WS2413 was developed for surfaces in electronics that are difficult to solder. It leaves a water-soluble residue. Easy and fast wetting, a short cycle time and a quick removal of residues are the main features of this solder wire.

Trilence Series: Automated Soldering

The flux system Trilence has been specially developed for demanding soldering tasks in the field of automated soldering. Due to its optimised properties, the flux system is ideally suited for laser soldering.

TRILENCE 3505

STANDARD

On a copper surface, the differences between residues of lead-free solder wires can be seen clearly. The Trilence solder wires are characterised by low spitting, light residues as well as excellent wetting.

The Trilence flux is available as a halogen-activated flux (**Trilence 3505** and **Trilence 2708**) as well as a halogen-free flux (**Trilence 3500**).

All Trilence fluxes are colophony-free and based on a synthetic resin matrix. The Trilence solder wires can be used like conventional solder wires. Due to the very low tendency to spit, the light residues and the high thermal load capacity of the Trilence flux, a particularly clean soldering pattern is produced.

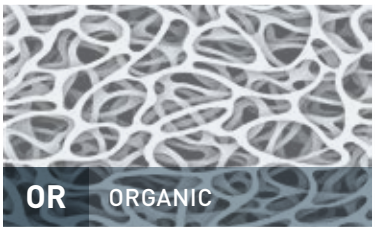
Solder Wire Flux Properties

	SOLDER WIRE FLUX	FLUX PROPERTIES				LEAD-CONTAINING ALLOYS					FLOWTIN SERIES (1) lead-free alloys with micro alloy additions				ECOLOY SERIES (2) lead-free alloys without micro alloy additions						SN100C™	GREENCONNECT/FAIRTIN
		FLUX CONTENT	HALOGENIDE CONTENT	NO-CLEAN	J-STD-004 / J-STD-004C	S-Sn60Pb40	S-Sn60Pb39Cu1	S-Sn63Pb37	S-Sn62Pb36Ag2	S-Pb93Sn5Ag2	Sn95.5Ag3.8Cu0.7 + FLOWTIN	Sn96.5Ag3.0Cu0.5 + FLOWTIN	Sn99Ag0.3Cu0.7 + FLOWTIN	Sn99.3Cu0.7 + FLOWTIN	S-Sn96Ag4	S-Sn95Ag4Cu1	S-Sn96Ag3Cu1	S-Sn98Cu1Ag	S-Sn99Cu1	S-Sn97Cu3	Sn99.3Cu0.7+NiGe	
		FLOWTIN TSC	FLOWTIN TSC305	FLOWTIN TSC0307	FLOWTIN TC	ECOLOY TS	ECOLOY TSC	ECOLOY TSC305	ECOLOY TSC0307	ECOLOY TC	ECOLOY TC300	SN100C™										
		MELTING RANGE				183 – 190°C	183 – 190°C	183°C	179°C	296 – 301°C	217°C	217 – 222°C	217 – 227°C	227°C	221°C	217°C	217 – 220°C	217 – 227°C	227°C	227 – 310°C	227°C	
CONTAINING HALOGENIDES	Trilence 2708	2.7%	0.8%	●	REM1							●		●								
	Trilence 3505	3.5%	0.5%	●	REL1							●		●								
	Kristall 505	3.0%	0.35%	●	REM1	●																
	Kristall 605	2.5%	0.2%	●	REL1							●		●								●
	Kristall 611	2.5%	0.7%	●	REM1							●		●							●	●
	HS10	2.5%	0.6%	●	ROM1	●	●	●	●	●					●	●	●		●	●		
	2630	2.0 / 2.2%	0.9%	●	ROM1		●									●			●			
	Alu 1	3.5%	0.45%	●	REM1														●			
HALOGENIDE FREE	HF32 SMD	1.0%	0.0%	●	ROL0	●			●													
	Kristall 400	2.2%	0.0%	●	REL0	●			●		●		●	●		●	●		●		●	
	Kristall 600	2.5%	0.0%	●	REL0							●		●							●	●
	HF32	3.5%	0.0%	●	ROL0	●	●		●							●			●			
	Trilence 3500	3.5%	0.0%	●	REL0							●		●								
ORGANIC	S321	2.0%	>5.0%		ORH1	●													●			
	WS2413	2.4%	1.3%		ORH1														●			
	Solid					●		●			●	●	●	●	●	●	●	●	●	●	●	

(1) The micro-alloyed Flowtin solders have been developed by Stannol to achieve the lowest possible dissolution rate of copper and iron. Depending on the general conditions, an increase in the life time of soldering tips of up to 50% is possible.
(2) All ultra pure, lead-free standard alloys are designated as Ecoloy.

Additional flux / alloy combinations are also possible, partially on a production-related minimun order quantity – please feel free to contact us!

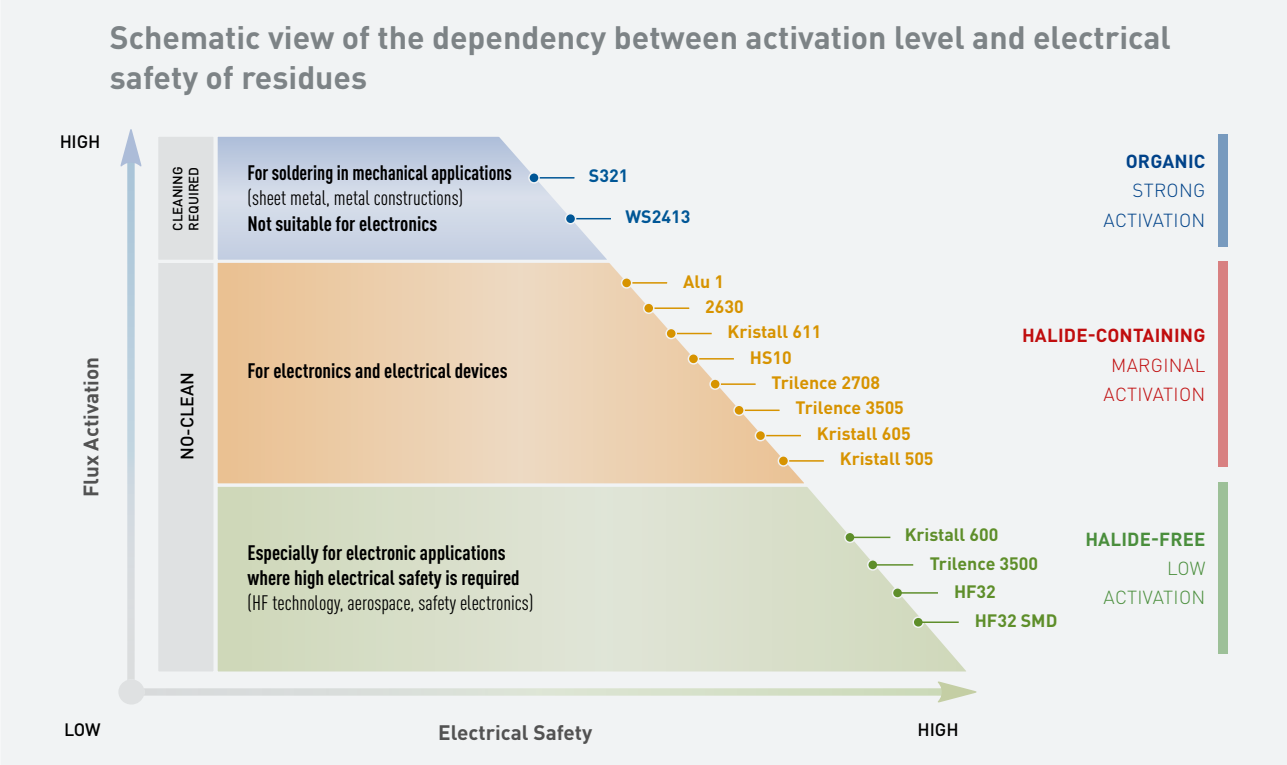
Flux Classification according to J-STD 004C

INGREDIENTS IN FLUXES	ACTIVITY	MAX % HALOGENIDES	CLASSIFICATION	FULL DESIGNATION
	Low	<0.05%	L0	ROL0
	Low	≥0.05 and <0.5%	L1	ROL1
	Moderate	<0.05%	M0	ROM0
	Moderate	≥0.05 and <2.0%	M1	ROM1
	High	<0.05%	H0	ROH0
	High	≥2%	H1	ROH1
	Low	<0.05%	L0	REL0
	Low	≥0.05 and <0.5%	L1	REL1
	Moderate	<0.05%	M0	REM0
	Moderate	≥0.05 and <2.0%	M1	REM1
	High	<0.05%	H0	REH0
	High	≥2%	H1	REH1
	Low	<0.05%	L0	ORL0
	Low	≥0.05 and <0.5%	L1	ORL1
	Moderate	<0.05%	M0	ORM0
	Moderate	≥0.05 and <2.0%	M1	ORM1
	High	<0.05%	H0	ORH0
	High	≥2%	H1	ORH1
	Low	<0.05%	L0	INL0
	Low	≥0.05 and <0.5%	L1	INL1
	Moderate	<0.05%	M0	INM0
	Moderate	≥0.05 and <2.0%	M1	INM1
	High	<0.05%	H0	INH0
	High	≥2%	H1	INH1

Flux Classification according to J-STD-004C

Flux Classification	L0	L1	M0	M1	H0	H1
Quantitative Halide Content (CL & BR)	< 0,05 %	≥ 0,05 and < 0,5 %	< 0,05 %	≥ 0,05 and < 2,0 %	< 0,05 %	≥ 2,0 %
Copper Mirror Test	No signs of breakthrough	No signs of breakthrough	Breakthrough in maximum 50% of the area	Breakthrough in maximum 50% of the area	Breakthrough in more than 50% of the area	Breakthrough in more than 50% of the area
Flux Corrosion	No signs of corrosion	No signs of corrosion	Minor signs of corrosion	Minor signs of corrosion	Major corrosion can be expected	Major corrosion can be expected
Conditions for passing the 100mΩ-SIR-test criteria	Not cleaned	Not cleaned	Cleaned or not cleaned	Cleaned or not cleaned	Cleaned	Cleaned

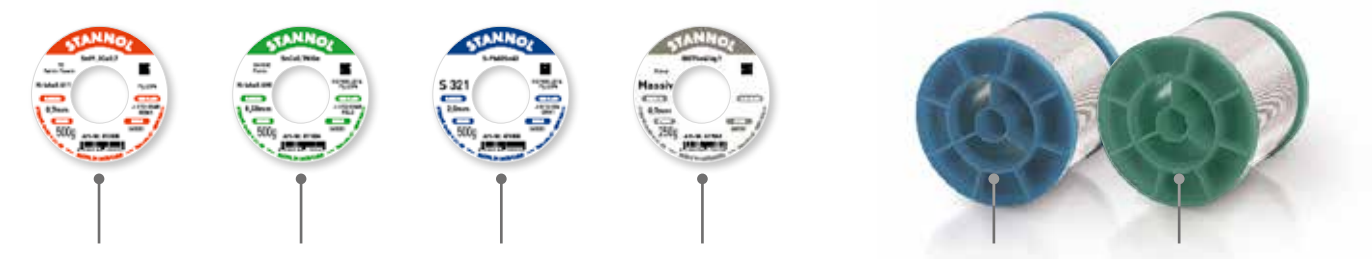
Activation Matrix



This illustration shows the relation between the flux activation and the electrical safety of the flux residues present on the assembly after the soldering process. The weaker the flux activation can be selected in the Stannol product selection, the higher the electrical safety of the flux residues can be expected after the soldering process. For example, the flux Kristall 611 with activated flux content achieves good electrical safety after the soldering process – as a No-Clean flux even without subsequent cleaning.

The Stannol Colour Code

Stannol uses a unique colour code for easy differentiation between the different groups of solder wires. The colour code is based on two parts: The first part is the colour of the reel, the second part is the colour on the label. This ensures an easy error prevention in mixed manufacturing areas.



Recycling and Disposal

Waste solders and solder dross still contain valuable metals that can be recycled. In addition, every production company that processes solders is legally obliged to dispose of the resulting waste products in an environmentally sound manner. This applies to both lead-containing and lead-free solders. As a certified waste disposal company, Stannol offers a professional and legally compliant take-back service.

The law has stipulated the following requirements for environmentally sound disposal:

- The waste must be reported to the designated authority.
- The production company is obliged to keep a record of the waste disposal.
- The disposal documents must be submitted to the designated authority.
- A transport permit must be obtained for each transport of the above-mentioned waste products.

Stannol takes care of these tasks for you. We handle the complete logistics: from transporting the waste products to dealing with the authorities and professional disposal. We are also happy to provide you with the appropriate transport containers free of charge.

In addition to disposal, we also offer the option of reworking your solder waste according to your own specifications – entirely within the framework of a resource-saving and environmentally compatible supply chain.

We report the Product Carbon Footprint (PCF)!

The PCF shows the CO_2 balance of a product – from the raw material extraction to disposal. Find out how the PCF helps you to make more climate-friendly decisions:

Environmetally Sound Disposal and Reprocessing

Disposal Procedure

We dispose of your waste products and issue a takeover certi- ficate. After analysis in our laboratory and melting down, you will receive the financial compensation via our scrap metal invoice according to the daily prices of the London Metal Exchange.

Reprocessing Procedure

We rework your solder waste into customer-specific alloys (calculating the reworking costs and deducting the melting loss).

Please note:

Melting losses must always be expected during both disposal and reworking. The amount of these losses depends on many factors and cannot be determined in advance.

Fluxes

Fluxes are used in soft soldering to remove oxides and other impurities from components and PCBs. Only then a reliable solder joint can be achieved.

The selection of the right flux for wave and selective soldering processes in electronics manufacturing is influenced by various factors. What is important in one manufacturing environment plays only a subordinate role in another. Our fluxes are just as diverse as our customers' requirements. Whether they are water-based or classic solvent-based fluxes, whether they may contain resins or whether certain substances cannot be used due to certain material compatibilities – the range of reliable Stannol fluxes has always grown with the current requirements since 1879. Here, we introduce the most important products from our flux range. We would be pleased to present other special fluxes from our product line in a personal discussion.

Our Stannol product selector also provides you with a product overview of our most important fluxes. In addition, you have the option of narrowing down the product selection according to various criteria.

greenconnect Fluxes

Stannol offers a special range of environmentally friendly fluxes. These are based on bio-ethanol instead of conventional ethanol. Alternatively, the base is water instead of isopropanol (IPA).

The halogen-free activated No-Clean flux **EF350 Bio** guarantees excellent wetting properties on different surfaces (for example OSP, Ni/Au, HAL, chem. Sn and chem. Ag) with both lead-free and lead-containing solder alloys. EF350 Bio is universally applicable – it can be used for wave soldering as well as selective soldering, it is also well suited for use in spray fluxers.

The use of bio-ethanol in EF350 Bio reduces the carbon footprint compared to conventional alcohol-based fluxes. Important for our customers: Extensive tests have proven that a 1:1 exchange of the flux is possible without changing the process parameters.

Water-based Fluxes

Stannol's environmentally friendly water-based fluxes can reduce the carbon footprint by 90 percent. **WF300S** is a halogen-free, low-solids flux designed primarily for consumer electronics manufactured in normal or nitrogen atmospheres. WF300S has been specifically optimised to reduce solder beads between adjacent connections. The innovative flux also works effectively on poorly solderable surfaces, such as oxidised copper.

WF130 and **WF131** are developments of water-based ORL0 fluxes. Both deliver perfect soldering results and leave very low amounts of electrically harmless residues in combination with an extremely low corrosion potential. These two water-based fluxes are true halogen-free fluxes and contain no VOCs. Due to the very low corrosive potential, both can be classified as L0, which is not often possible with water-based fluxes. The main difference of WF131 is a further reduction in residue levels, with the minor trade-off of a slightly smaller process window.

The introduction of water-based fluxes often requires a comprehensive assessment of the current equipment technology and application. Our team will be happy to support you in this and provide competent advice on site.

Bio-Flux for Selective Soldering

The soldering flux **SF1000 Bio** has been specially developed for selective soldering of electronic assemblies. The low solids content in combination with specially adjusted halogen-free activation results in excellent wettability of a wide variety of surfaces (e.g. OSP, Ni/Au, HAL), even with lead-free solder alloys. This flux can also be used for other soldering processes such as wave and dip soldering. Compared to conventional alcohol-based fluxes, the carbon footprint is significantly reduced.

All common low-solids No-Clean fluxes from Stannol can be applied reproducibly in very small quantities using all standard spraying methods..

Solar Fluxes

The No-Clean fluxes **EF160 Bio PV** and **EF180 Bio** PV have been specially developed for use in the photovoltaic module industry and meet all of its requirements. The fluxes are halogen- and resin-free as well as low in solids, which makes them particularly suitable for solar module production. EF180 Bio PV has a slightly higher solids content in comparison and a stronger activation than EF160 Bio PV.

Both fluxes provide equally good solderability in module assembly processes for soldering by IR and convection. They can be applied and soldered by hand to the ribbon as well as in tabber/stringer soldering systems with spray fluxers. The precisely formulated activator systems leave no visible residues after soldering. The innovative fluxes are also part of our greenconnect series: They have a 95 percent bio-based content according to DIN EN 16785-2. By using bio-ethanol, the carbon footprint can be significantly reduced.

The greenconnect flux EasyFlux **EF200 Bio PV** has been specially developed for use on solar cells and other sensitive surfaces. Due to the halogen-free activation, an excellent wetting ability is achieved and it also leaves hardly any visible residue. This makes EF200 Bio PV the ideal choice for applications where absolute surface cleanliness is required. According to DIN-EN 16785-2, it has a 98 percent bio-based content. By using bio-ethanol, the carbon footprint can be significantly reduced.

Stannol's solder flux **X33-08i PV** has been specially developed for use in the photovoltaic industry. The flux relies on a complex alcohol-based composition that is free of rosin and halogens and also has a low solids content. Due to its excellent wettability on solar cells, X33-08i PV is an ideal choice for companies in the photovoltaic industry looking for a high-quality and reliable solder flux.

Electronics Fluxes

The electronics manufacturing industry places high demands on modern flux systems. The products of the **EF series** meet these requirements, not least because of their great variety and wide range of applications. A large part of the series, for example, has been specially developed for application with current spray flux systems.

Activations for every application

The EF fluxes are available with different activation levels. This means that the optimum activation can be selected for each individual process – depending on solderability and reliability requirements. For a full-tunnel nitrogen system, for example, a very low activation can be considered. For soldering on older systems and on surfaces that are difficult to solder, a higher activation should be chosen.

High to very high electrical safety

The reliability of the No-Clean flux and its residues after soldering also plays an important role in the selection of the right flux. Thus, within the completely halogen-free EF series, fluxes can be found both with and without resin or with the smallest amounts of activator up to very broadband fluxes. By this, all requirements of current electronics production can be covered. The EF fluxes have in common that a high to very high electrical safety can be achieved with varying small residue quantities on the soldered PCBs.

Our electronics fluxes in comparison

In direct comparison to flux **EF330**, flux **EF350** increases the insulation resistance of flux residues due to a low addition of resins and at the same time reduces the formation of solder beads. The fluxes of the **EF200** series are more weakly activated and show their strengths in the area of full-tunnel nitrogen systems, as they leave less residues on the PCBs due to their lower solid content. The flux **EF270F** is the optimised variant for application by foam fluxer. It is characterised above all by a fine-pored foam crown.

When developing the EF250 flux, the most important criterion was to minimise contamination by the flux. The use of the EF250 not only reduces the cleaning effort of the system, but also the residues on the assembly itself – while at the same time ensuring safe wetting and complying with common test criteria for electrical safety.

Special Flux

The halogen-free No-Clean flux **AK-1 Bio** was specially developed for cable tinning, tinning on component connections, soldering on copper or copper-passivated surfaces. It is based on environmentally friendly bio-ethanol and complements our greenconnect series.

The tinning of enamelled copper wires can be carried out safely with the flux 500-17/1. The flux, which was specially developed for dip soldering processes, guarantees through its particularly high solid content that even at high dip soldering bath temperatures there is still sufficient active flux on the component to be soldered. Even if parts of the flux are lost due to the high temperatures of the solder bath, a good soldering result is achieved.

Semi-aqueous Fluxes

Often, water-based fluxes cannot be processed satisfactorily on older soldering systems because the preheating is too short or too weak. In order to still significantly reduce the proportion of VOC emissions, fluxes can be used whose solvent is a mixture of water and alcohols. This group of fluxes is characterised by lower flash points and a 50 percent reduction in VOC content compared to alcohol-based fluxes. They are also resin- and halogen-free.

The semi-aqueous flux **HW139** with 2.5 wt.% solids has already proven itself for many years in numerous soldering tasks. It is also easy to apply by means of a spray fluxer. As a newer development, the **HW240** ensures good soldering results with the same high soldering quality and wetting ability. At the same time, the residue quantities are greatly reduced due to a unique activator combination.

	FLUX	DIN EN ISO 9454-2	J-STD-004 J-STD-004C	APPLICATION METHOD *	VOC CONTENT	SOLID CONTENT %	APPLICATION	GREEN-CONNECT
SOLAR FLUX	**EF160 Bio PV**	2.2.3.A	ORL0	S, D	High	1.6	**Stringer**, Wave, Selective	●
	EF180 Bio PV	2.2.3.A	ORL0	S, D	High	1.8	**Stringer**, Wave, Selective	●
	EF200 Bio PV	2.2.3.A	ORL0	S, D	High	2.0	**Stringer**, Wave, Selective	●
	X33-08i PV	2.2.3.A	ORL0	S, D	High	2.0	**Stringer**, Wave, Selective	
EF-SERIES	**EF200**	2.2.3.A	ORL0	S	High	2.0	**Wave**, Selective	
	EF210	2.2.3.A	ORL0	S	High	2.1	**Wave**, Selective	
	EF250	2.2.3.A	ORL0	S	High	2.5	**Wave**, Selective	
	EF270	2.2.3.A	ORL0	S	High	2.7	**Wave**, Selective	
	EF270F	2.2.3.A	ORL0	S, F	High	2.7	**Wave**, Selective	
	EF330	2.2.3.A	ORL0	S	High	3.3	**Wave**, Selective	
	EF350	2.2.3.A	ORL0	S	High	3.5	**Wave**, Selective	
	EF350 Bio	2.2.3.A	ORL0	S	High	3.5	**Wave**, Selective	●
WATER BASED	**WF130**	2.1.3.A	ORL0	S	Free	3.0	**Wave**, Selective	●
	WF131	2.1.3.A	ORL0	S	Free	2.6	**Wave**, Selective	●
	WF300F	2.1.3.A	ORM0	F	Free	4.4	**Wave**	●
	WF300S	2.1.3.A	ORM0	S	Free	4.4	**Wave**	●
SPECIAL FLUX	**AK-1 Bio**	2.2.3.A	ORL0	S, D	High	5.0	**Dipping**	
	SF1000 Bio	2.2.3.A	ORL0	S	High	2.5	**Selective**, Wave	●
	500-6B	1.1.3.A	ROL0	S, F, D, B	High	6.0	**Wave, Selective**	
	500-17-1	1.1.3.A	ROL0	S, F, D, B	High	15.0	**Dipping**	
	500-3431BF	2.2.3.A	ORM0	S	High	4.4	**Wave**	
	900-7-1H	2.1.2.A	ORM1	S	High	1.7	**Dipping**	
	HW139	2.2.3.A	ORM0	S	Medium	2.5	**Wave**, Selective	
	HW240	2.2.3.A	ORL0	S, F	Medium	2.4	**Wave**, Selective	
	L2	2.2.3.A	ORL0	S, F	High	2.0	**Wave**, Selective	
	P770	2.2.3.A	ORL0	S, F	High	2.3	**Wave**, Selective	
	P981	2.2.3.A	ORL0	S, F	High	2.7	**Wave**, Selective	

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

Stannol Test and Analysis Service

We offer a comprehensive test and analysis service through our in-house laboratory. This includes not only careful execution of the tests, but also detailed evaluation and documentation of the results. If you need a service that is not listed, please contact us – we will be happy to provide you with an individual offer.

If you require a service that is not listed, please contact us – we will be happy to provide you with a customised offer.

Further information can be found on our website. Sample forms and other materials are also available for download.

Solder Bath and Metal Analyses

Would you like to have your solder bath routinely checked? Or do you have the impression that your solder bath is contaminated or the soldering results have deteriorated? Our solder bath analysis provides you with reliable information about the quality of your solder bath: Our laboratory is equipped with modern radio spectrometers that analyse your solder bath samples and check them for composition or possible impurities. For our customers, we carry out process-related solder bath analyses. For non-customers who would like to use our service, this is subject to a charge. Our experienced team will also be happy to help you define specific intervention limits.

Wetting Tests and Solderability Tests

Poor solderability is one of the most common causes of defects in a soldering process. Therefore, it makes sense to test the solderability of components or PCBs in advance.
We carry out solderability tests on SMD components, wired components, printed circuit boards and substrates for you according to the common standards of IEC and IPC. For this purpose we use the wetting balances MUST System 3 from GEN3 Systems. This allows the wetting process to be quantified. The wetting forces are recorded and the test process is documented on video.

Inspection of Printed Circuit Boards and Assemblies for Ionic Contamination

Electrically conductive contaminations on printed circuit boards and assemblies are a major problem – especially in the context of the increasing miniaturisation of all components. With the help of our Contaminometers CM11 and CM33 from GEN3 Systems, we can reliably check your PCBs and assemblies for ionic contamination. Testing is carried out in accordance with IPC-TM-650 2.3.25 (ROSE Testing) and IEC 61189-5-504 (PICT Testing).

Surface Insulation Resistance Testing (SIR test)

Our laboratory offers you the opportunity to have professional SIR tests carried out. These tests provide valuable insights into the electrochemical behaviour of your process materials – especially around the compatibility of different solders and coatings used in a soldering process.

Our state-of-the-art equipment, such as the latest generation GEN3 AutoSIR2+ and the climate chamber from weisstechnik®, ensures precise and reliable measurements that are performed in accordance with current standards. With the AutoSIR2+, we are able to realise measurement setups with up to 128 channels.

Stannol offers to perform SIR tests according to current standards.

Solder Bars

Solder bars are used as base and refill solders in a wide variety of alloys in wave and selective soldering systems within the electronics industry. Stannol solders for electronics are manufactured exclusively from first-melt metals or high-purity secondary raw materials. For this purpose, we only use tin with a purity content of at least 99.9 percent.

Stannol produces many different high-purity electronic solders for lead-containing and lead-free applications. These are available either as standard solders or as solders with special properties, such as reduced dross formation or optimised alloying properties. The continuous development of our solders is a top priority at Stannol.

Here, we introduce some of these optimised alloys, as well as the most important solders for use in electronics. We would be pleased to present our complete product overview as well as possible special alloys to you in a personal discussion.

Our Stannol product selector also provides you with a product overview of our most important solder bars. In addition, you have the option of narrowing down the product selection according to various criteria.

Ecoloy – Lead-free Solders from Stannol

Lead-free solders based on pure tin with the alloying additions of silver and/or copper are suitable for all lead-free applications in electronics production. For electronics manufacturing, Ecoloy **TSC alloys** (**T**in, **S**ilver, **C**opper) have proven to be a reliable lead-free option. TSC alloys are available in various types and differ in the content of tin, silver and copper. The eutectic alloy TSC with Sn95.5Ag3.8Cu0.7 is particularly noteworthy here due to its low melting point of 217 °C and its excellent wetting properties.

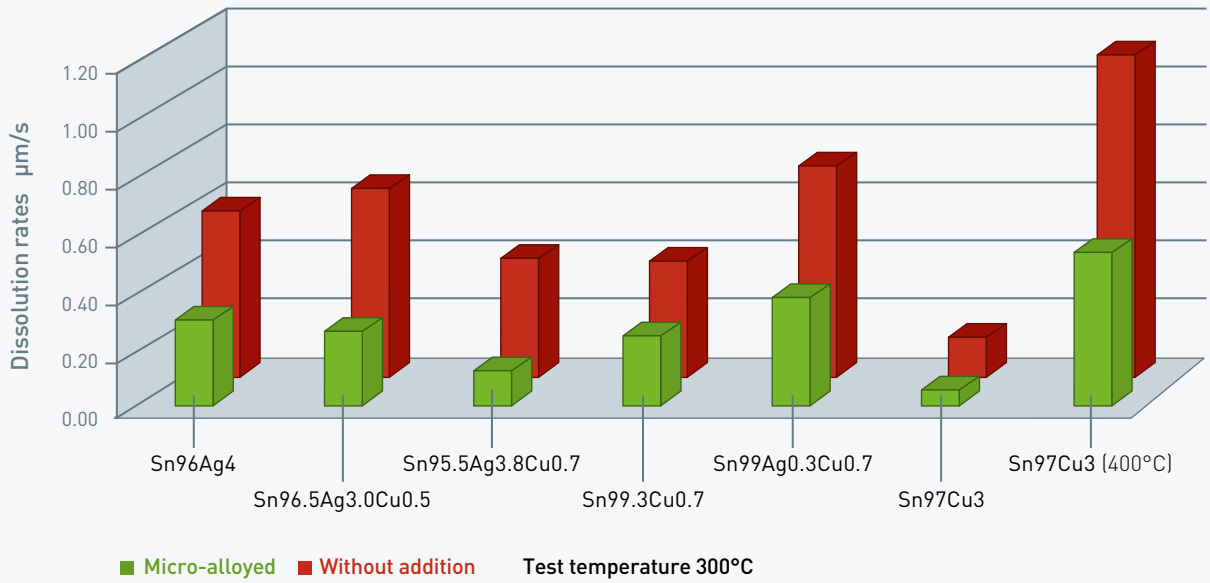
The alloy **TSC305** with Sn96.5Ag3.0Cu0.5 has also established itself as an industrial standard. It has a lower silver content and ensures a longer service life due to its low copper starting value.

Even more economical is the **TSC0307** alloy, which contains only 0.3 percent silver and 0.7 percent copper with 99 percent tin. Here, up to 90 percent of cost-driving silver can be saved – with almost the same processing properties.

The **TC alloy** (S-Sn99.3Cu0.7) is the most cost-effective silver-free alternative as a lead-free solder. The product advantages result primarily from the lack of silver, a defined melting point of 227 °C and good wetting properties.

Flowtin – Stannol's Patented Innovation

In our research and development department we have created the micro-alloyed solders of the **Flowtin series**. These are particularly suitable for production areas in which the lowest possible dissolution of copper and iron plays an essential role for a stable process. Due to low additions of Co and Ni, these solders have a significantly lower copper and iron solubility. The finer particle structure of the flowtin solders and the resulting optimised shine of the solder joint are also worth mentioning – a further advantage compared to lead-free standard solders. The flowtin alloys are patented by Stannol.



Different dissolution rates in comparison

SN100C™ – Silver-free Industry Standard

SN100C™ is a micro-alloyed, silver-free solder that is used worldwide. Based on Sn99.3Cu0.7 with additions of Ni and Ge, it has been used in many wave soldering and HASL systems for around 20 years and has become an industry standard over time. The SN100C™ alloys are cost-effective because they do not contain expensive silver. The addition of nickel and germanium ensures that both the dissolution of copper and the amount of dross formed are greatly reduced.

The SN100C™ alloy is a worldwide patented solder developed by the Japanese company Nihon Superior (e.g. patent no. DE 69918758 and EP 0985486). We have an official licence for this important product and offer the possibility to purchase SN100C™ including its variants in our well-known Stannol quality. In addition to solder bars, we also produce various solder wires in the SN100C™ alloy to provide a uniform alloy in production.

SN100C™ is a micro-alloyed, silver-free solder from the Japanese company Nihon Superior and has become an industry standard over time.

Solid Wire

Solid wires are used, for example, when selective solder baths have to be refilled. Stannol provides all common alloys, diameters and reel sizes for this purpose.

Fairtin Version

All alloys in our range of solder bars are also available as Fairtin version.

Composition of Solders

ALLOY NAME	ALLOY NUMBER[2]	ALLOY COMPOSITION	INTERNAL NAME Tin Silver Copper Bismuth	ROHS	MELTING POINT MELTING RANGE (approximate values)	FAIRTIN
Sn99.9 [1]	---	Sn99.9	ECOLOY T	lead-free	232°C	•
S-Sn99.3Cu0.7 [2]	401	Sn99.3Cu0.7	ECOLOY TC	lead-free	227°C	•
S-Sn97Cu3 [2]	402	Sn97Cu3	ECOLOY TC300	lead-free	227–310°C	•
S-Sn96.3Ag3.7 [2]	701	Sn96.3Ag3.7	ECOLOY TS	lead-free	221°C	•
S-Sn95.5Ag3.8Cu0.7 [2]	713	Sn95.5Ag3.8Cu0.7	ECOLOY TSC	lead-free	217°C	•
S-Sn96.5Ag3.0Cu0.5 [2]	711	Sn96.5Ag3Cu0.5	ECOLOY TSC305	lead-free	217–220°C	•
Sn97.1Ag2.6Cu0.3 [3]	---	Sn97.1Ag2.6Cu0.3	ECOLOY TSC263	lead-free	217–224°C	•
S-Sn99Cu0.7Ag0.3 [2]	501	Sn99Cu0.7Ag0.3	ECOLOY TSC0307	lead-free	217–227°C	•
S-Bi58Sn42 [2]	301	Bi58Sn42	ECOLOY TB	lead-free	139°C	•
Bi57Sn42Ag1 [3]	---	Bi57Sn42Ag1	ECOLOY TBS	lead-free	139–142°C	•
Flowtin Sn99.3Cu0.7 [4]	---	Sn99.3Cu0.7 + FLOWTIN	FLOWTIN TC	lead-free	227°C	•
Flowtin Sn99.6Cu0.4 [4]	---	SN99.6Cu0.4 + FLOWTIN	FLOWTIN TC04	lead-free	227°C	•
Flowtin Sn97Cu3 [4]	---	Sn97Cu3 + FLOWTIN	FLOWTIN TC300	lead-free	227–310°C	•
Flowtin Sn96Ag4 [4]	---	Sn96Ag4 + FLOWTIN	FLOWTIN TS	lead-free	221°C	•
Flowtin Sn95.5Ag3.8Cu0.7 [4]	---	Sn95.5Ag3.8Cu0.7 + FLOWTIN	FLOWTIN TSC	lead-free	217°C	•
FlowtinSn96.5Ag3.0Cu0.5 [4]	---	Sn96.5Ag3.0Cu0.5 + FLOWTIN	FLOWTIN TSC305	lead-free	217–220°C	•
Flowtin Sn97.1Ag2.6Cu0.3 [4]	---	Sn97.1Ag2.6Cu0.3 + FLOWTIN	FLOWTIN TSC263	lead-free	217–224°C	•
Flowtin Sn98.5Ag0.8Cu0.7 [4]	---	SN98.5Ag0.8Cu0.7 + FLOWTIN	FLOWTIN TSC0807	lead-free	217–226°C	•
FlowtinSn99Ag0.3Cu0.7 [4]	---	Sn99Ag0.3Cu0.7 + FLOWTIN	FLOWTIN TSC0307	lead-free	217–227°C	•
Flowtin + Sn99.3Cu0.7 [5]	---	Sn99.3Cu0.7 + FLOWTIN+	FLOWTIN+ TC	lead-free	227°C	•
TSCX0307 [3]	---	Sn99Ag0.3Cu0.7+X	TSCX0307	lead-free	217-227°C	•
SN100C [6]	---	Sn99.3Cu0.7NiGe	SN100C	lead-free	227°C	•
SN100Ce [6]	---	Sn99.9NiGe	SN100Ce	lead-free	227-232°C	•
SN100CS [6]	---	Sn99.3Cu0.7NiGe	SN100CS	lead-free	227°C	•
SN100CeS [6]	---	Sn99.9NiGe	SN100CeS	lead-free	227-232°C	•
SN100CS+ [6]	---	Sn99.3Cu0.7NiGe	SN100CS+	lead-free	227°C	•
SN100CeS+ [6]	---	Sn99.9NiGe	SN100CeS+	lead-free	227-232°C	•
S-Sn63Pb37E [3]	102 [3]	Sn63Pb37	STANNOLOY SN63	lead-containing	183°C	•
S-Sn63Pb37E [3]	102 [3]	Sn63Pb37	STRATOLOY SN63	lead-containing	183°C	•
Sn63Pb37 [3]	---	Sn63Pb37P	WSL3 SN63	lead-containing	183°C	•
S-Sn62Pb36Ag2 [2]	171	Sn62Pb36Ag2	Sn62Ag2	lead-containing	179°C	•
S-Sn60Pb40 [2]	103	Sn60Pb40	Sn60	lead-containing	183–190°C	•
S-Pb93Sn5Ag2 [2]	191	Pb93Sn5Ag2	HMP (high melting point)	lead-containing	296–301°C	•

1 According to DIN EN 61190-1-3 | **2** According to ISO EN 9453 | **3** According to ISO EN 9453 and internal specification based on ISO EN 9453 | **4** Analogous to ISO EN 9453 or internal specification + Flowtin addition | **5** Analogous to ISO EN 9453 or internal specification + Flowtin and desoxidation addition

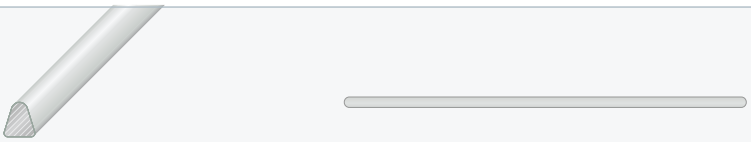
6 Variations in the SN100C™ solders are mainly based on different Ni and Ge contents.
Further details can be found in the technical datasheet or you may ask our team of application engineers about the best option for your application.

All the above mentioned lead-free alloys are available as copper-free versions, too. The copper-free versions can be required to maintain the copper content or reduce higher copper contents during the usage of the solder in the soldering equipment. The above listed alloys represent only a small selection; other alloys are available on request. Some alloys are subject to production-related MOQs.

Available Delivery Forms of Stannol Solder

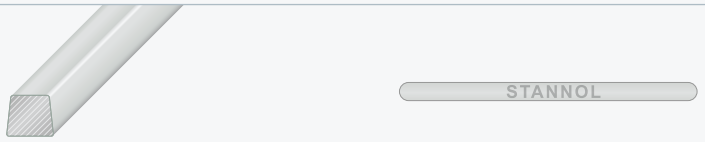
TRIANGULAR BAR [1]

Dimensions (LxWxH)
443 x 11.5 x 14.5 mm
approx. 0.36 kg bei Sn99.3Cu0.7 [2]



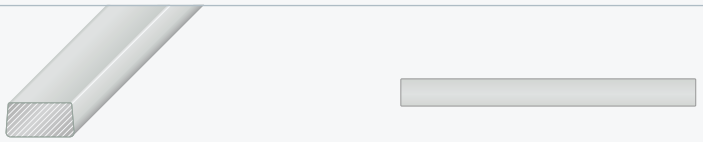
FORMBLOCK 330 [1]

(kg-Stange)
Dimensions (LxWxH)
328 x 20 x 20 mm
approx. 1 kg bei Sn63Pb37 [2]



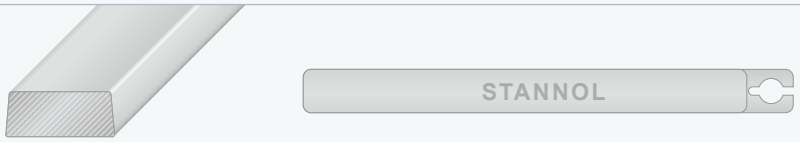
FORMBLOCK 325 E

Dimensions (LxWxH)
325 x 30 x 15 mm
approx. 0.88 kg bei SN100C® [2]



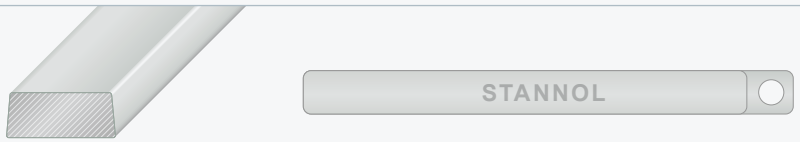
FORMBLOCK NR. 7 [1]

Dimensions (LxWxH)
540 x 48 x 20 mm
approx. 3.7 kg bei Sn63Pb37 [2]



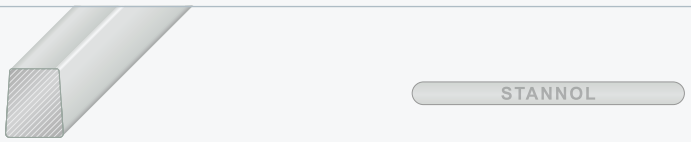
FORMBLOCK NR. 8

Dimensions (LxWxH)
540 x 48 x 20 mm
approx. 3.7 kg bei Sn63Pb37 [2]



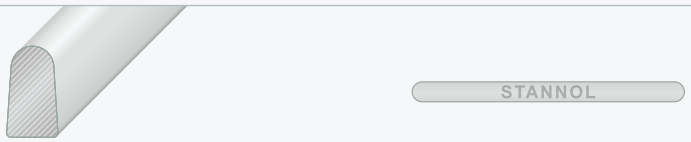
FORMBLOCK 300
(Poka Yoke)

Dimensions (LxWxH)
300 x 25 x 28.5 mm
approx. 1.6 kg bei Sn63Pb37 [2]



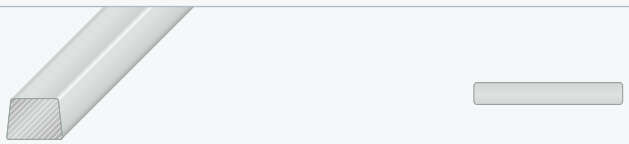
FORMBLOCK 300 LF
(Poka Yoke)

Dimensions (LxWxH)
300 x 22 x 40 mm
approx. 1.6 kg bei Sn99.3Cu0.7 [2]



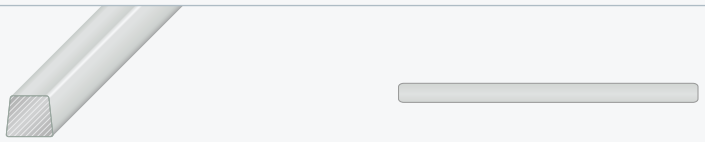
FORMBLOCK 160 E

Dimensions (LxWxH)
164 x 24 x 20 mm
approx. 0.54 kg bei Sn63Pb37 [2]



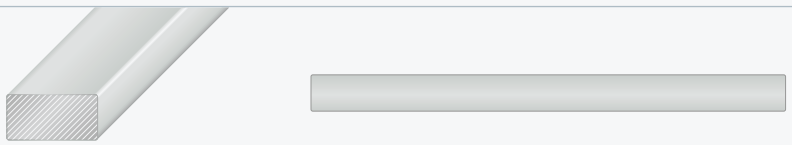
FORMBLOCK 330 E

Dimensions (LxWxH)
330 x 21 x 20 mm
approx. 1 kg bei Sn96.5Ag3.5 [2]



FORMBLOCK 523 E

Dimensions (LxWxH)
523 x 40 x 20 mm
approx. 3 kg bei Sn99.3Cu0.7 [2]



Other sizes and delivery forms are available upon request. The dimensions specified in the catalogue may vary due to production techniques.
1 Preferred bar form / **2** Average weight of the specified alloy.

Stannol Partners

For many years, Stannol has relied on collaborating with professional and reliable partners. These partnerships complement our diverse and up-to-date range of products and services. In this way, we can always provide you with a product and service portfolio that meets your requirements.

GEN3 Systems

As a distributor of the British company GEN3 Systems, Stannol sells various process control systems exclusively for the German-speaking region, including solderability test systems, SIR test devices or systems for the determination of ionic impurities. We also offer a complete after-sales service for these products – including maintenance, calibration, repair and spare parts. We will be happy to support you in selecting and using the system that is appropriate for you.

Heraeus

Since 2015, Stannol has been a competent and experienced service partner to our sales and development partner Heraeus. The decades of successful professionalism of both companies complement each other ideally through synergies and solutions in the fields of production and development. The focus of this partnership is on demanding applications in automotive and consumer electronics as well as semiconductor applications. The highest possible quality and process stability are the most important criteria in the selection of materials and process-supplementary solutions. Our closely networked teams are looking forward to supporting you with their expertise and experience from the planning stage right through to implementation.

HumiSeal

Stannol has been the exclusive distributor of HumiSeal – the expert for conformal coatings – in Germany for more than 20 years. We offer comprehensive technical advice on this complex product group. HumiSeal is the only manufacturer that has concentrated solely on the development, production and distribution of conformal coatings for electronics for around 70 years. In recent years, other product groups such as potting compounds, TIM, electrically shielding fillers and sealants have been added to meet the ever-increasing demands of our customers. The conformal coatings are manufactured in England at HumiSeal Europe Ltd, the European factory of HumiSeal. Our well-trained team will be glad to help you choose the right conformal coating for you.

Do you already know our website www.stannol.eco?

Here you can find out everything you need to know about sustainability – from environmentally friendly raw material extraction to energy-saving measures and recycling.
Take a look and discover how we live sustainability!


SOLDER WIRES


FLUXES


SOLDER PASTES


ACCESSORIES


SOLDER BARS

STANNOL

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