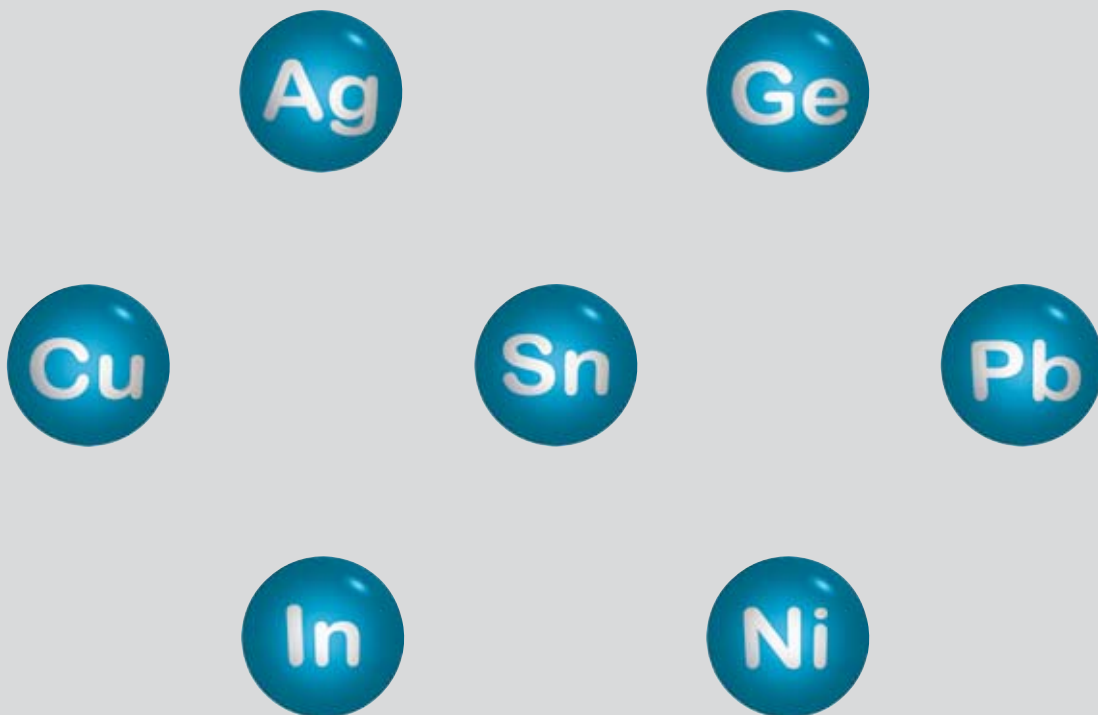


Delivery Program - Electronic

The technology.....



.....for soldering in electronic production.

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Everything from one source!

If you do not find the products you need in our delivery program, please do not hesitate to contact our sales department.

We will be pleased to assist you.

ISO 9001 - Quality assurance



Our laboratory for product research and quality control



FELDER GMBH is an innovative enterprise in the field of soldering technology.

Sophisticated production processes guarantee a constant high quality for our solders and fluxes.

All **FELDER-products** are subject to continuous quality monitoring by our laboratory and are produced according to the standards of **ISO 9001:2000**.

Our laboratory is equipped, amongst others, with an **optical emission spectrometer** and an **ir-spectrophotometer**.

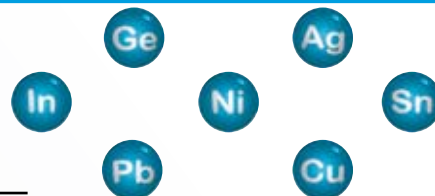
We are also in position to carry out the conventional methods of analysis. These are the conditions for many of our company's outstanding developments.

Careful advice and customized problem solutions are part of our philosophy.

The large range of products makes us a highly efficient partner for trade and industry.

We face up to your requirements. Please try us!

To a good cooperation.



Electronic solders ISO-Tin®

Pure metals made of first melting

250 g	triangular rods	400 mm
1,0 kg	rods	330x20x20 mm
3,5 kg	blocks with hanging hole	545x47x20 mm

We produce these alloys also as solder wire for automatic supply and as rod-cuts for first filling.



Product	Alloy	DIN EN 61190	Melting Range	Field of application
Sn100Ni+ **	Sn99,3Cu0,7NiGe	Sn99Cu.7	227 °C eutectic	Wave soldering, HASL, Refill
Sn99Ag+ **	Sn99Ag0,3Cu0,7NiGe	-	217 - 227 °C	Wave soldering, HASL, Refill
Sn98Ag+ **	Sn98Ag1,2Cu0,7NiGe	-	217 - 222 °C	Wave soldering, Refill
Sn96Ag+ **	Sn96,5Ag3,0Cu0,5NiGe	Sn96Ag03Cu0,4	217 °C eutectic	Wave soldering, Refill
Sn95Ag+ **	Sn95,5Ag3,8Cu0,7NiGe	Sn96Ag04Cu0,7	217 °C eutectic	Wave soldering, Refill
Sn96,5Ag3,0Cu0,5	Sn96,5Ag3,0Cu0,5	Sn96Ag03Cu0,4	217 °C eutectic	Wave soldering, lead free
Sn95,5Ag3,8Cu0,7 *	Sn95,5Ag3,8Cu0,7	Sn96Ag04Cu0,7	217 °C eutectic	Wave soldering, lead free
Sn96,5Ag3,5	Sn96,5Ag3,5	Sn96Ag04	221 °C eutectic	Wave soldering, lead free
Sn99,3Cu0,7	Sn99,3Cu0,7	Sn99Cu.7	227 °C eutectic	Wave soldering, lead free
Sn63Pb37	Sn63Pb37E	Sn63Pb37	183 °C eutectic	Wave soldering
Sn60Pb40	Sn60Pb40E	Sn60Pb40	183 - 190 °C	Wave soldering

We would be also pleased to produce alloys according to your requests and standards.

Our lead-free solders comply with guideline RoHS and ElektroG. A declaration of conformity can be provided on request.

**Please note the application technological advantages of our NiGe-endowed electronic solders.
Do not hesitate to ask for our detailed product information.**

* ISURF-Patent (US-Patent No. 5.527.628)

** Fuji-Patent: DE-Patent-No. 19816671C2; US-Patent-No 6.179.935B1; Japan-Patent-No. 3296289

Desoxidation tabs

Electronic solder alloy with phosphorous additives (0,8% P)

250 g	tabs	approx. 5 g/pc
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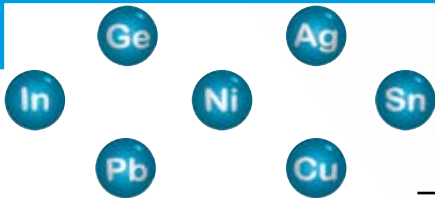


Alloy (according to DIN EN 29453)	Melting range	Field of application
Sn60Pb40P (S-Sn60Pb40)	183 - 190 °C	wave- and dip-soldering baths
Sn99,9P (S-Sn99,9)	232 °C eutectic	wave- and dip-soldering baths, lead free

For reduction of dross development in solder baths.

After time the desoxidation part of the solder reduces in solder baths with low throughput and therefore its dross-reducing effect (the bath surface shows the typical prismatic colours). FELDER desoxidation tablets compensate for the losses due to their high concentration of phosphorous.

The solder bath surface turns into glossy silver color after melting of the desoxidation tablets. The quantity of tablets to use depends on the volume of the bath.



High temperature solders ISO-Tin®

Pure metals made of first melting

250 g	triangular rods	400 mm
We produce these alloys also as solder wire for automatic supply.		



Product	DIN EN 29453	DIN EN 61190	Melting range	Field of application
Sn98Cu2NiGe	-	-	227 - 290 °C	dip tin-plating, transformer fabrication, lead free
Sn96Cu4Ni	-	-	227 - 335 °C	dip tin-plating, transformer fabrication, lead free
Sn97Cu3Ni	-	-	227 - 310 °C	dip tin-plating, transformer fabrication, lead free
Sn95Cu5 *	-	-	230 - ca. 300 °C	dip tin-plating, transformer fabrication, lead free
Sn97Cu3 *	S-Sn97Cu3	-	230 - 250 °C	dip tin-plating, transformer fabrication, lead free
HT-L 60/40	S-Sn60Pb40	Sn60Pb40	183 - 190 °C	dip tin-plating, transformer fabrication
KD 60/40	S-Sn60Pb40CuP	-	183 - 190 °C	dip tin-plating, transformer fabrication

We would be also pleased to produce alloys according to your requests and standards.

* Also available with phosphorous additives.

For solder baths with continuous operating temperatures of approx. 350 - 450 °C.

The tin-plating of copper braids and varnished copper wires requires higher solder temperatures. These temperatures result in heavier oxidation of the melt-liquid solder. Standard electronic solders can be used up to a solder temperature of 300 °C. Above 300°C solders with a higher desoxidation content should be used. FELDER high-temperature solders have been specifically designed for this use and allow best soldering results. The surface tension of the solder is very low and therefore smallest contact surfaces and wires can be tin-plated.

High-melting solders ISO-Tin®

(RoHS-conformable: solder alloys with lead content > 85%)

Pure metals made of first melting

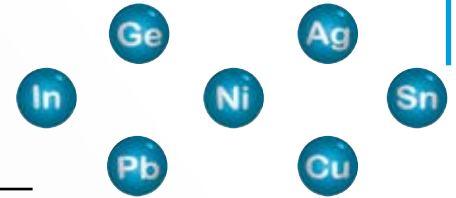
250 g	triangular rods	400 mm
1,0 kg	rods	330x20x20 mm
We produce these alloys also as solder wire for automatic supply.		



Product	DIN EN 29453	DIN EN 61190	Melting range	Field of application
Pb93Sn5Ag2	S-Pb93Sn5Ag2	Sn05Pb93Ag02	280 - 284 °C	dip tin-plating, transformer fabrication
Pb98Sn2	S-Pb98Sn2	Sn02Pb98	320 - 325 °C	dip tin-plating, transformer fabrication
Pb98Ag2	S-Pb98Ag2	Ag03Pb97	304 °C eutectic	dip tin-plating, transformer fabrication
Pb95Ag5	S-Pb95Ag5	Ag06Pb94	304 - 380 °C	dip tin-plating, transformer fabrication

For solder baths with continuous operating temperatures up to approx. 570 °C!

Varnished copper wires with high-temperature varnish are used for transformer manufacture. These varnishes require melting temperatures of up to 570 °C. Our solders which melt at high temperatures are particularly designed for this critical process and are highly temperature stable. According to RoHS and ElektroG solders with a lead content above 85% can still be used after 2006-07-01 for electronic manufacture. There are no lead-free alternatives for this type of solder which could be used. A declaration of conformity can be provided on request.



Electronic fluxes ISO-Flux®

Fluxes for the mechanical soldering of printed circuit boards

1 l	bottle
5 l	canister
25 l	canister
Other packages deliverable on request	



Product	DIN EN 29454	DIN EN 61190	Solid content	Field of application
ELR 3410	2.2.3.A	ORL0	3,5 %	wave soldering, halide free, no-clean, also lead free
ELR 3420	2.2.3.A	ORL0	3,5 %	wave soldering, halide free, no-clean, also lead free
ELR 3413	2.2.3.A	ORL0	2,1 %	wave soldering, halide free, no-clean
ELI 3320	2.2.3.A	ORL0	2,7 %	wave soldering, halide free, resin free, no-clean, also lead free
ELI 0099	2.1.3.A	ORL0	< 1 %	wave soldering, no-clean, in inert gas systems, also lead free
EWL 2510	2.1.2.A	ORM1	7,0 %	wave soldering, halide containing, water washable, also lead free
EVF 2310	2.1.3.A	ORL0	3,8 %	wave soldering, halide free, lead free, no-clean, VOC-free
Palux 30H				HASL-tinning

For soldering of electronic components with THD and SMD by machine.

FELDER ISO-Flux® electronic fluxes are particularly suitable for high-grade manufacturing of commercial electronic. You achieve best soldering results even in case of circuits with mixed component parts.

„ELR“ low-residue no-clean electronic flux based on organic activators and natural or modified natural resins. The flux residues have a very high surface resistance and are not corrosive.

„ELI“ resin-free no-clean electronic flux on basis of organic activators. Our „ELI 0099“ has been specifically designed for soldering in inert gas systems and leaves a very low amount of flux residues due to its low amount of solids.

„EWL“ highly effective, water-soluble electronic flux, contains and activated by halide, so that it can be applied wherever components have to be washed after the soldering process.

Flux thinner

Thinner on alcohol basis with foam stabilizing additives

1 l	bottle
5 l	canister
25 l	canister
Other packages deliverable on request	

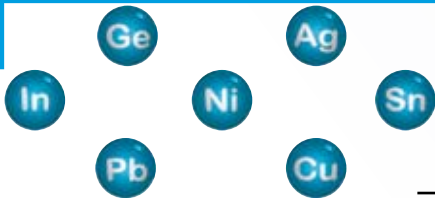


Product	Usable for the following FELDER fluxes
Thinner “VF-1“	all ISO-Flux® “ELR“ and “ELI“
Thinner “VF-2“	ISO-Flux® EWL, the solder oils “E“, “EL“ and “Kolo“ as well as all cable fluxes

For setting of the optimum concentration of ISO-Flux® fluxes.

The FELDER flux-thinners serve to set the optimum concentration of FELDER ISO-Flux®- fluxes in soldering systems. During application in foaming or spraying devices there is a gradual increase in concentration which worsens the soldering result. Even in case of dip flux stations due to the large surface the solvent will be used up.

As fluxes with a low content of solids have a small difference of density we recommend that the thinning-ratio should be determined via titration of the acid value (see FELDER titration set).



Soft solder fluxes ISO-Flux®

Solder oils and pastes on resin basis

Paste	20 g, 50 g, 100 g, 250 g	jar
Oil	100 ml, 1 l	bottle
Oil	5 l, 25 l	canister
Other packages deliverable on request		



Product	DIN EN 29454	DIN EN 61190	Halide content	Field of application
Soldering oil "Kolo"	1.1.1.A	ORL0	-	hand, dip and wave soldering in the electronics
Soldering paste "KK31"	1.1.1.C	ORL0	-	repairing works on PCB's
Soldering oil "EL"	1.1.3.A	ORL0	-	hand, dip and wave soldering in the electronics
Soldering paste "EL"	1.1.3.C	ORL0	-	repairing works on PCB's
Soldering oil "E"	1.1.2.A	ORM1	< 1%	electronics and electrical equipment production
Soldering paste "E"	1.1.2.C	ORM1	< 0,5 %	electronics and electrical equipment production

For soft-soldering in electrical engineering, in electrical equipment manufacture and electronic.

The FELDER soft-solder fluxes ISO-Flux® "Kolo", "EL" and „E“ are very suitable for soldering and tin-plating which will be performed under high temperatures and long soldering periods.

Cable fluxes ISO-Flux®

Special fluxes for cable serial manufacture

1 l	bottle
5 l	canister
25 l	canister
Other packages deliverable on request	



Product	DIN EN 29454	DIN EN 61190	Solid content	Halide content	Field of application
KF 23	2.2.3.A	ORL0	5,0 %	-	cable serial manufacturing, transformer fabrication, selective soldering
KF 32	1.2.3.A	ORL0	15,0 %	-	see KF 23, resin containing
KF-L / HF	2.1.3.A	ORL0	7,4 %	-	see KF 23, less VOC content < 5%
KF 1	2.1.2.A	ORM1	2,8 %	0,5 %	cable serial manufacturing, transformer fabrication
KF 070	2.1.2.A	ORM1	1,3 %	< 1,5 %	cable serial manufacturing, transformer fabrication
KF-L	2.1.2.A	ORM1	3,4 %	< 0,5 %	cable serial manufacturing, less VOC content < 5%

Fluxes for soldering and tin-plating of wire ends, varnished copper wires and selective soldering systems.

FELDER ISO-Flux® wire flux has been especially the fact designed for tin-plating of wire ends, plugs and socket connections and electronic components. It is different from common fluxes in that absolutely partial tin-plating can be performed. The solder will not rise in copper braids with high capillary effect higher than the area where the flux has been applied. The solder is usually applied by dipping.

Flux cored soft solder wires

Flux cored, halide activated soft solder wires, flux according to DIN EN 29454.1, 1.1.2.B, respectively DIN EN 61190-1-3, ROM1

ISO-Core® "RA" Standard solder wire for hand soldering in electrical engineering, halide content < 1,0 %

ISO-Core® "RA-05" Slightly halide activated, restricted suitable in electronics, halide content < 0,5 %.

ISO-Core® "RA-AT" Especially developed for mechanical soldering in electrical engineering with short tacklife and high soldering temperatures, halide content < 1,5 %.



Ø in mm	0,25 • 0,35 • 0,50 • 0,75 • 1,00 • 1,50 2,00 • 3,00 • 4,00 • 5,00 • 6,00
Spools	0,10 • 0,25 • 0,50 • 1,00 • 2,50 • 5,00 kg
Flux content	2,5 % standard
Flux cores	1 (standard), 3 and 5 cores
We are of course pleased to produce all solder wires according to your standards.	

Product	Alloy	DIN EN 61190	Melting range	Field of application
Sn100Ni+	Sn99,3Cu0,7NiGe	Sn99Cu.07	227 °C eutectic	hand and mechanical soldering, lead free
Sn99Ag+	Sn99Ag0,3Cu0,7NiGe	-	217 - 227 °C	hand and mechanical soldering, lead free
Please note the application technological advantages of our NiGe-endowed electronic solders. Do not hesitate to ask for our detailed product information.				
SAC	Sn95,5Ag3,8Cu0,7	Sn96Ag04Cu0,7	217 °C eutectic	hand and mechanical soldering, lead free
Sn96,5Ag3,5	Sn96,5Ag3,5	Sn96Ag04	221 °C eutectic	hand and mechanical soldering, lead and copper free
Sn99,3Cu0,7	Sn99,3Cu0,7	Sn99Cu.7	227 °C eutectic	hand and mechanical soldering, lead and silver free
Sn97Cu3	Sn97Cu3	-	230 - 250 °C	hand and mechanical soldering, lead free
Sn60Pb40	Sn60Pb40	Sn60Pb40	183 - 190 °C	hand and mechanical soldering, lead containing
Sn60Pb38Cu2	Sn60Pb38Cu2	Sn60Pb38Cu02	183 - 190 °C	hand and mechanical soldering, lead containing
Pb93Sn5Ag2	Pb93Sn5Ag2	Sn05Pb93Ag02	280 - 284 °C	hand and mechanical soldering, RoHS-conformable
Other alloys can be delivered on request				

For precision soldering in electronic, electrical engineering, telecommunication and electrical motor manufacture.

FELDER ISO-Core® solder wires are manufactured of the same highly pure alloy components according to international standards as the FELDER ISO-Tin® electronic solders.

The fluxes have a high temperature resistance and do not spray during the melting process! The bright, solid flux residues of these solder wires do not result in corrosion on non-iron metals. Therefore, they can remain on the soldering joint.

An optimum wetting and distribution value above standard makes this wire a top-quality product under the tube soldering wires, even without lead.



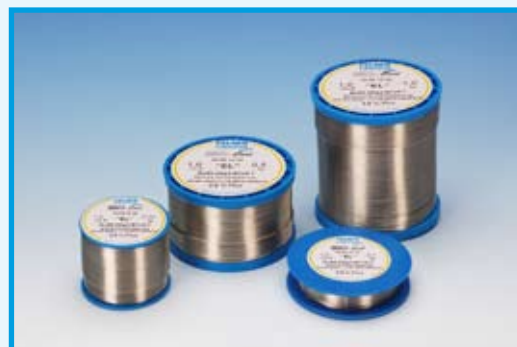
Flux cored electronic soft solder wires

Flux cored, halide-free activated soft solder wires, flux according to DIN EN 29454.1, 1.1.3.B, 1.2.3.B and 2.2.3.B respectively DIN EN 61190-1-3, ROL0

ISO-Core® "EL" No-clean standard solder wire for hand soldering in the electronics, halide-free activated (1.1.3.B), standard flux content 3,5%.

ISO-Core® "ELS" No-clean electronic solder wire based on synthetic resins (1.2.3.B), standard flux content 1,0 %

ISO-Core® "ELR" Low residue, no-clean SMD solder wire especially developed for the demands of repairing works on SMD-equipped PCB's (2.2.3.B). standard flux content 1,0 %



Ø in mm	0,25 • 0,35 • 0,50 • 0,75 • 1,00 • 1,50 • 2,00 • 3,00 • 4,00
Spools	0,10 • 0,25 • 0,50 • 1,00 • 2,50 • 5,00 kg
Flux cores	1 (standard), 3 and 5 cores
We are of course pleased to produce all solder wires according to your standards.	

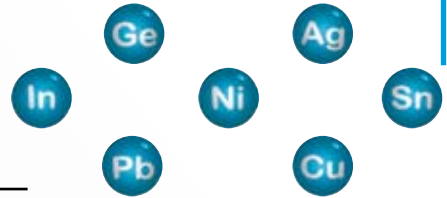
Product	Alloy	DIN EN 61190	Melting range	Field of application
Sn100Ni+	Sn99,3Cu0,7NiGe	Sn99Cu.07	227 °C eutectic	hand and mechanical soldering, lead free
Sn99Ag+	Sn99Ag0,3Cu0,7NiGe	-	217 - 227 °C	hand and mechanical soldering, lead free
Please note the application technological advantages of our NiGe-endowed electronic solders. Do not hesitate to ask for our detailed product information.				
SAC	Sn95,5Ag3,8Cu0,7	Sn96Ag04Cu0,7	217 °C eutectic	hand and mechanical soldering, lead free
Sn96,5Ag3,5	Sn96,5Ag3,5	Sn96Ag04	221 °C eutectic	hand and mechanical soldering, lead and copper free
Sn99,3Cu0,7	Sn99,3Cu0,7	Sn99Cu.7	227 °C eutectic	hand and mechanical soldering, lead and silver free
Sn97Cu3	Sn97Cu3	-	230 - 250 °C	hand and mechanical soldering, lead free
Sn60Pb40	Sn60Pb40	Sn60Pb40	183 - 190 °C	hand and mechanical soldering, lead containing
Sn60Pb38Cu2	Sn60Pb38Cu2	Sn60Pb38Cu02	183 - 190 °C	hand and mechanical soldering, lead containing
Pb93Sn5Ag2	Pb93Sn5Ag2	Sn05Pb93Ag02	280 - 284 °C	hand and mechanical soldering, RoHS-conformable
Other alloys can be delivered on request				

No-clean soft-solder wire for high-demand applications in electronic and electrical engineering.

FELDER ISO-Core® solder wires are manufactured of the same highly pure alloy components according to international standards like FELDER ISO-Tin® electronic solders.

The fluxes have a high temperature resistance and do not spray during the melting process! The fluxes do not result in corrosion in non-iron metals and have the highest surface resistance values. Therefore, they can remain on the soldering joint.

In connection with lead-free alloys Sn95,5Ag3,8Cu0,7 the qualities of „EL“ and „ELR“ were positively rated by Siemens Berlin, certification center CT MM 6, already in January 2001.



ISO-Core® "EL-AT"

Flux cored, halide activated soft solder wire,
flux according to DIN EN 29454.1, 1.1.2.B,
respectively DIN EN 61190-1-3, ROM1



Ø in mm	0,25 • 0,35 • 0,50 • 0,75 • 1,00 • 1,50 • 2,00 • 3,00 • 4,00
Spools	0,10 • 0,25 • 0,50 • 1,00 • 2,50 • 5,00 kg
Flux content	2,5 % (lead free 3,0 %)

Alloy	DIN EN 29453	DIN EN 61190	Melting range	Field of application
Sn60Pb38Cu2	S-Sn60Pb38Cu2	Sn60Pb38Cu02	183 - 190 °C	hand and mechanical soldering
Sn95,5Ag3,8Cu0,7	-	Sn96Ag04Cu0,7	217 °C eutectic	hand and mechanical soldering, lead free

Also available with other standard alloys!

Special solder wire for automated soldering in electronic manufacture.

FELDER ISO-Core® "EL-AT" has, compared to common electronic solder wires, markedly better flowing and wetting characteristics. The low halide content (< 0,4 %) does not have a negative influence on the surface resistance of the residues. They are therefore rated as completely harmless and can remain on the soldering joints. The fluxes do not show any corrosion in the copper mirror test, however, they must be categorized as ROM1, respectively 1.1.2.B due to their halide content.

Detailed information is available in our individual product information.

ISO-Core® "EWL"

Flux cored, halide activated soft solder wires,
flux according to DIN EN 29454.1, 2.1.2.B,
respectively DIN EN 61190-1-3, ORM1



Ø in mm	0,25 • 0,35 • 0,50 • 0,75 • 1,00 • 1,50 • 2,00 • 3,00 • 4,00
Spools	0,10 • 0,25 • 0,50 • 1,00 • 2,50 • 5,00 kg
Flux content	1,5 %, 2,5 % standard

Alloy	DIN EN 29453	DIN EN 61190	Melting range	Field of application
Sn60Pb40	S-Sn60Pb40	Sn60Pb40	183 - 190 °C	hand and mechanical soldering
Sn99,3Cu0,7	S-Sn99Cu1	Sn99Cu.7	227 °C eutectic	hand and mechanical soldering, lead free
Sn95,5Ag3,8Cu0,7	-	Sn96Ag04Cu0,7	217 °C eutectic	hand and mechanical soldering, lead free

Also available in other standard alloys!

Electronic solder wire with water-soluble flux residues.

In electronic manufacture one again and again encounters soldering applications where protective coating or encapsulating processes follow after the soldering. In order to avoid negative reactions between flux residues and protective coatings or encapsulating materials we recommend the removal of flux residues. Modern no-clean fluxes are not corrosive nor electrically conductive, but they can be removed only with great effort. The residues of ISO-Core® "EWL" can be removed to 100% using distilled water (without additives).



No-clean SMD soft solder pastes

Homogenous, ready-made and odourless mixture of metal powder, binding agents, solvents, fluxes and thixotropic additives.
Flux according to DIN EN 29454.1, 1.1.3.C, respectively DIN EN 61190-1-3, ROL1

ISO-Cream® “DELTA 5” Highest wetting with lead-free applications.
Reduction of peak-temperature for ca. 20°C.
Reduction of the ΔT / PCB of up to 5 K.
Long working period of at least 48 hours.
Suitable for reflow and vapour phase.

ISO-Cream® “EL 3201” For all applications particularly for dispensing.
Metal powder content 85 - 90 %.
Excellent soldering results with minimum flux residues.

ISO-Cream® “EL 3202” Especially for vapour phase soldering and stencil printing.
Minimum water clear residues.
Processing time range for at least 24 h.

ISO-Cream® “EL 3203” Excellent tack force for assembly machines with high acceleration respectively deceleration.
Printed boards up to 32 hrs.
High outline stability.
Long stencil and tack life up to 8 h.



jars	0,25 and 0,5 kg
cartridges	6 and 12 oz respectively ProFlow cartridges
dispensing cartridges	5, 10 and 30 ccm
Other packages deliverable on request	

Lead free alloys	
Sn96Ag+	217 - 219 °C
Sn96,5Ag3Cu0,5NiGe	
Sn96,5Ag4Cu0,5	217 - 223 °C
Sn96,5Ag3,5	221 °C eutectic
Sn99,3Cu0,7	227 °C eutectic
Bi58Sn42	138 °C eutectic

Metal powder content	
dispensing	85 - 88 %
screen printing	88 %
stencil printing	88 - 90 %

Lead containing alloys	
Sn62Pb36Ag2	179 °C eutectic
Sn63Pb37	183 °C eutectic
Sn62Pb37,4Ag0,4Sb0,2*	179 - 183 °C
Pb93,5Sn5Ag1,5	296 - 301 °C

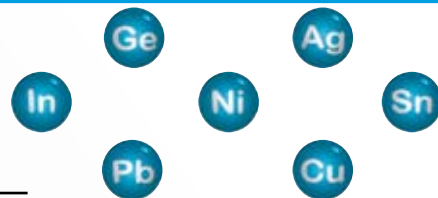
*Anti-tombstoning alloy

Grain sizes		
KG 2	standard	45 - 75 µm
KG 3	fine pitch	25 - 45 µm
-	DELTA 5	25 - 38 µm
KG 4	superfine pitch	20 - 38 µm
KG 5	superfine pitch	15 - 25 µm

High flexibility taking into account customer specifications.

All ISO-Cream® - SMD solder pastes can be set based on customer request to viscosity ranges between 300 and 900 Pa s (acc. to Brookfield, 5 U/min, TF-spindle, 25 °C).

Modern test and control procedures based on national and international standards ensure a 100% continual, batch-spanning quality.



SMD special soft solder pastes

Homogenous, ready-made and odourless mixture of metal powder, binding agents, solvents, fluxes and thixotropic additives

ISO-Cream® “RA 2601“ Flux according to DIN EN 29454.1, 1.1.2.C, respectively DIN EN 61190-1-3, ROM1. Especially for bad wettable parts. The flux residues should be removed after soldering.

ISO-Cream® “EWL 2303“ Flux according to DIN EN 29454.1, 2.1.3.C, respectively DIN EN 61190-1-3, ORM0. Solder paste with water washable residues. Excellent wetting on all well-known surfaces. The flux residues are completely removeable with distilled water.



jars	0,25 and 0,5 kg
cartridges	6 und 12 oz respectively ProFlow cartridges
dispensing cartridges	5, 10 and 30 ccm
Other packages deliverable on request	

For soldering on components difficult to access and later cleaning processes.

The flux residues of modern no-clean pastes are not corrosive nor electrically conductive, but they can be removed only with relative great effort.

The residues of our **ISO-Cream® “EWL 2303“** can be removed to 100% using distilled water (without additives). These SMD pastes are available with the same alloys, metal components and grain sizes as our non-clean pastes.

SMD and BGA re-work fluxes

Flux according to DIN EN 29454.1, 1.1.3.C, respectively DIN EN 61190-1-3, ROL1

dispensing cartridges	5, 10 and 30 ccm
jars	100 g
Other packages deliverable on request	



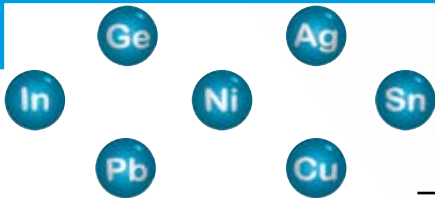
Product	Viscosity	Field of application
EL 3201-B	200 - 350 Pa s	re-work of SMD devices
EI 3202-A	200 - 300 Pa s	re-work of SMD devices, especially for lead free soldering

For resoldering of SMD components on PCBs.

ISO-Flux® “EL 3201-B“ is suitable for metal-free resoldering of SMD components on PCBs. They are perfectly suitable for soldering systems Sn/Pb, Sn/Pb/Ag.

ISO-Flux® “EL 3202-A“ has been amended to the new conditions in respect to activation and temperature stability as part of the lead-free-conversion and has therefore been optimized for soldering systems Sn/Ag, Sn/Ag/Cu and Sn/Cu.

In template printing it is suitable for positioning of components before the soldering process. The flux consistency ensures that components are held in their correct position until the soldering process is completed.



Soldering accessories

Titration set The FELDER titration set offers the user the option to determine the activity of the electronic flux in a simple manner. Using titration the concentration of the soldering activators in the flux are measured on basis of the acid value. Based on the result of titration and the respective thinning diagrams the respective amount of thinner can be added.

The set consists of:

- Titration apparatus
- Aspirette (pipette ball)
- Measuring pipette 5 ml, division in 0,05 ml
- Erlenmeyer flask 250 ml, with 50 ml division
- Cup 250 ml, with 50 ml division
- Titration solution, 1000 ml
- Drip bottle with indicator, 100 ml
- Operating manual



Titration solvent KOH-solution for titration.
Trading unit: 1 l bottle, 5 and 25 l canister

Indicator solvent Solution to determine the switch over point of the titration (from transparent to pink).
Trading unit: 0,1 l and 1 l bottle.



De-soldering braids Flux dipped copper braids to remove solder from SMD and THT components and to remove excessive solder from printed circuits. Flux in accordance with DIN EN 29454.1, 1.1.3.B (ROL0).
Widths: 1,0 • 1,5 • 2,0 • 2,5 • 3,0 mm
On snap spools each 1,6 m and spools each 15 -100 m

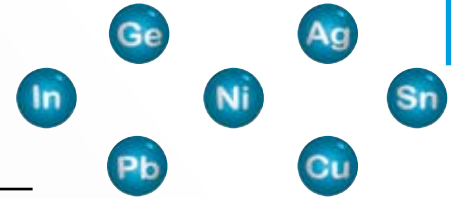
Tinner For cleaning and tin-plating of soldering tips
Tinner „lead-free“ Consisting of a mixture of soldering activators, resins, soldering powder and adhesive agents. It removes carefully even heavy oxidation layers with minimal smoke development.
Tinner : Sn60Pb40, 20 g tin, with sticking pad.
Tinner „lead-free“: Sn96,5Ag3,5, 15 g tin, with sticking pad.



Circuit board cleaner „ILR“ A watery-alkaline cleaning solution to remove flux residues from soldered electronic components.
Trading unit: 1 l bottle, 5 and 25 l containers

SMD glue FELDER SMD glue is a thixotroph epoxy glue for surface mounting of electronic components on SMD circuit boards. It is particularly suitable for high-speed dosing. The glue is not tacky and forms stable glue spots.
SMD glue red, for template printing
SMD glue yellow, for dispenser application
Trading unit: 5, 10, 30 ccm cartridges, 100 g jars





FELDER GMBH was founded in 1979 in Duisburg, Germany, with the objective to provide a comprehensive range of soft and hard soldering products for a wide variety of business groups, be it sanitary, heating, hardware, roofing, automotive component and electronics sectors.

Since its inception, the company has evolved into a leading manufacturer of solders, fluxes, solder pastes and soldering accessories in Germany. Our strengths include flexibility and a broad assortment of products that is unique in Europe.

With the number of customers constantly growing, we had to expand our production area in 1986. As a result, we moved our operations to Oberhausen, where one of the most modern solder production facilities in Germany was erected.



In spite of expanding our facilities in 1991, we had to increase our production area and warehouse once again in 2005. We produce our soft solders, fluxes, solder pastes and the relevant accessories using state-of-the-art equipment on a total area covering roughly 4,500 m², including our current 4,000 m² production area.

In order to provide our customers with maximum quality at all times, we implement strict quality control in accordance with DIN EN ISO 9001:2000 during every phase of production from receipt of metals and chemicals through to the finished products.

By maintaining this high quality standard, FELDER GMBH secures its market position for the future.