

**FELDER ISO-Cream® „EL 5510“ – Lead-free, Sn96Ag+**

**No-Clean Solder paste for an excellent wetting on all known surfaces.**

**FELDER-ISO-Cream® „EL 5510“ – Lead-free  
Sn96Ag+**

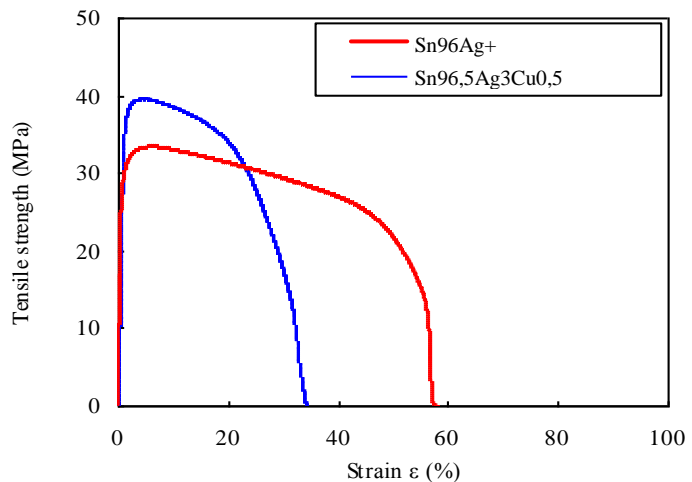
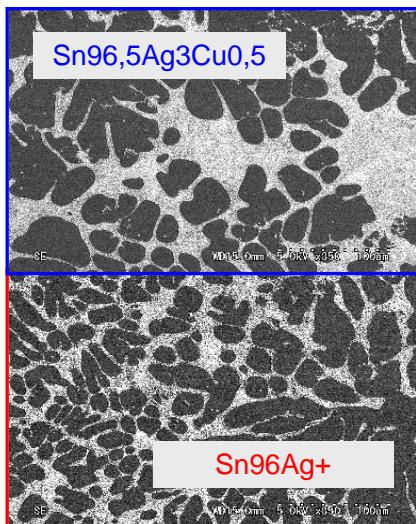
**Flux, DIN EN 29454 ,1.1.3.C,  
DIN EN 61190-1-3, ROL0**

**Metal powder content 88,5%,  
250 g jars, 500 g jars, in cartridges and Pro-Flow cassettes**

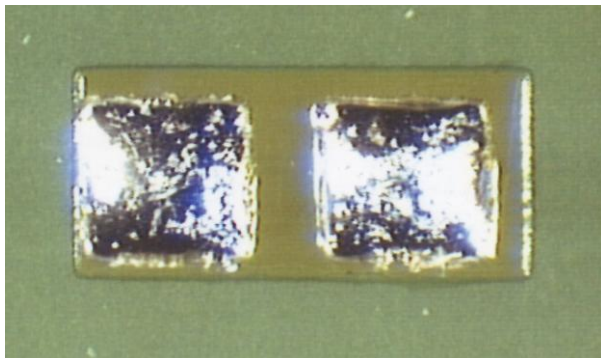
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**Description**

The solder paste ISO-Cream® „EL 5510“- lead-free is a homogenous, ready-made, odourless mixture made of metal powder, bonding agents, solvents, fluxes and thixotropic agents. ISO-Cream „EL 5510“ – lead-free possess all positive properties of the nickel and germanium endowment like e. g. refinement of the alloy structural condition and the increasing of the creep fracture.



This paste has excellent wetting qualities and is excellent for soldering of difficult solderable surfaces like e. g. chemical NiAu, chemical Ag or OSP.



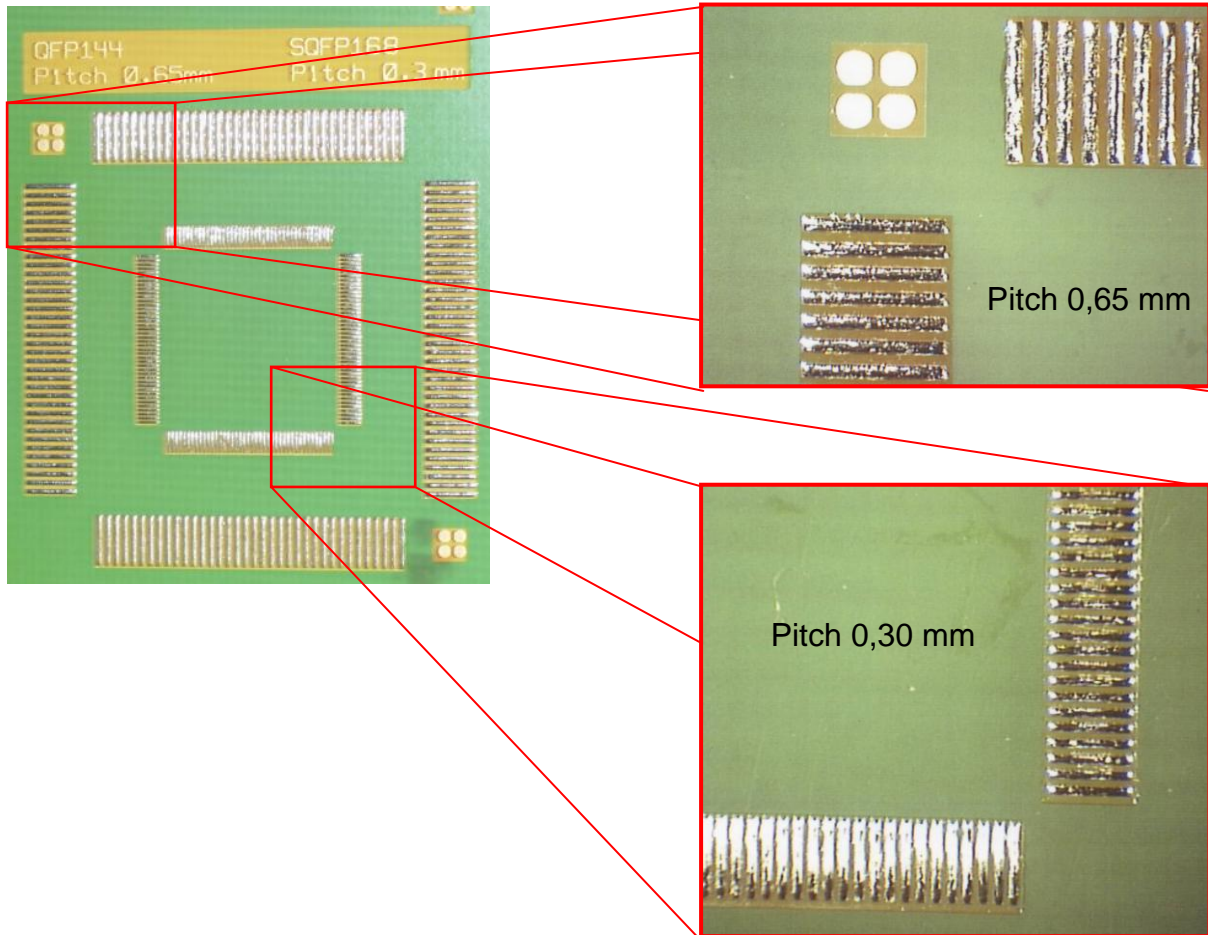
Chem.-NiAu



Cu

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Even components with slightest pad gap can be processed without any problem.

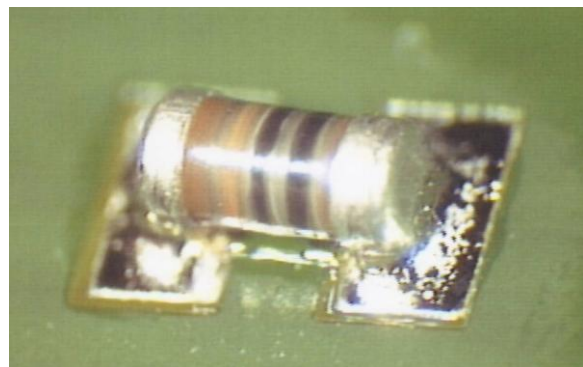
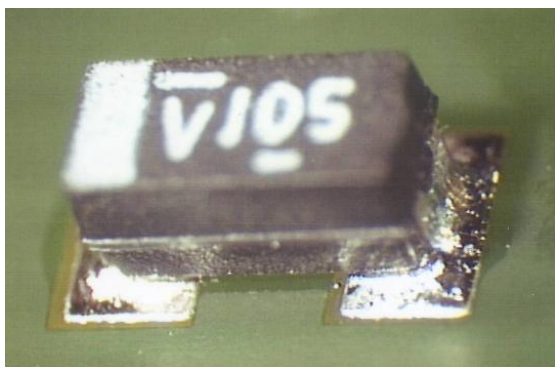


## FELDER ISO-Cream® „EL 5510“ – Lead-free, Sn96Ag+

The flux residues show a quite high surface resistance :

Surface resistance SIR	85°C/85%RF: 1,24x10 <sup>11</sup> 96h	DIN EN 61189-5
Blank test	85°C/85%RF: 2,68x10 <sup>11</sup> 96h	DIN EN 61189-5

The solder paste ISO-Cream® „EL 5510“ – lead-free is insensitive against humidity and temperature. It shows no tendency for formation of solder balls at chip-resistance and conductors.



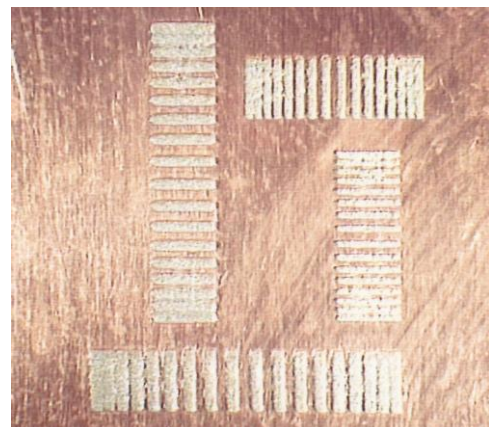
FELDER ISO-Cream® „EL 5510“ – lead-free has a very high wet adhesive strength and is also suitable for very high print speeds.

Adhesiveness	at least 48 hours
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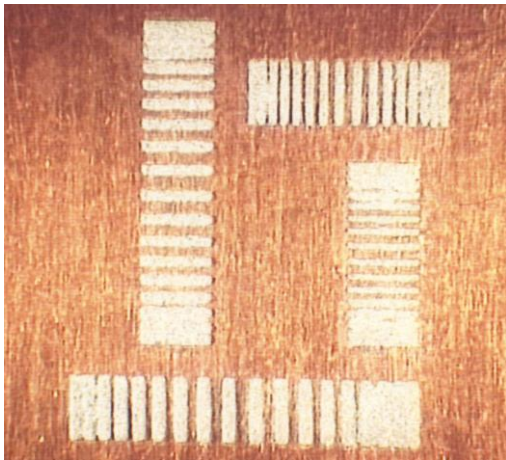
The paste has a very long stencil time and may be applied on printing machines with a temperature control unit (very strong ventilation). The rheology of this paste has been optimized in order to achieve excellent printing qualities at narrow openings as well as a very good first print after a break.

### Contour stability (Slump)

15 min. after paste print	
25°C / 50% RF	
<b>Test: passed</b>	
horizontal 0,33 x 2,03	0,15mm free
0,2 x 2,03	0,125mm free
vertical 0,33 x 2,03	0,10mm free
0,2 x 2,03	0,10mm free

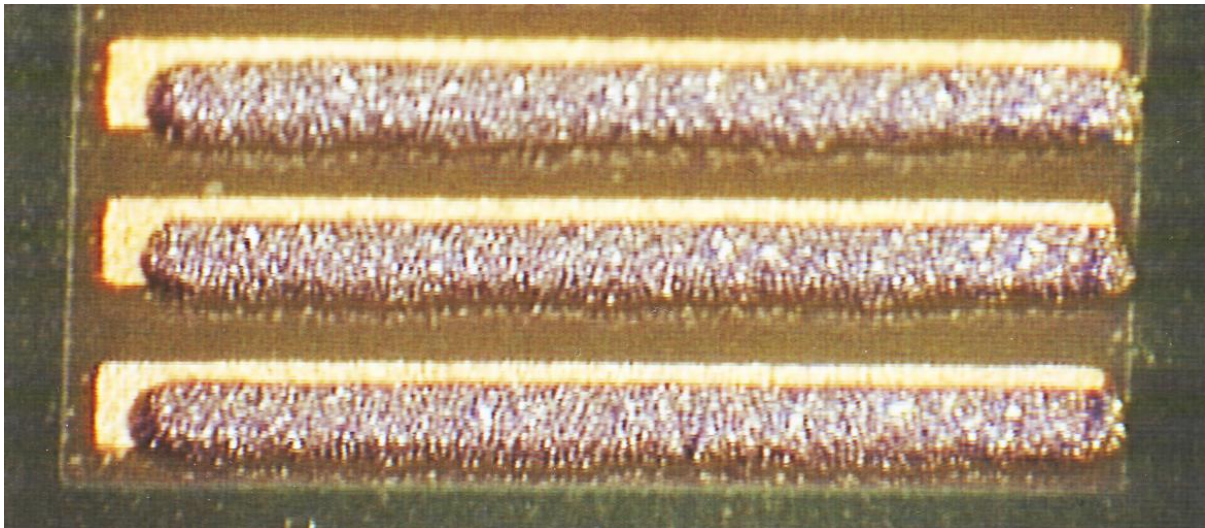


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after 15min. bei 150°C	
	<b>Test: passed</b>
horizontal 0,33 x 2,03	0,20mm free
0,2 x 2,03	0,125mm free
vertical 0,33 x 2,03	0,20mm free
0,2 x 2,03	0,15mm free

Laboratory tests have shown that the first print after a break of 6 hours was unobjectionable.



**Delivery form**

Alloy	Melting point	Metal powder form	Metal powder content	Viscosity
Sn96,5Ag3Cu0,5NiGe	217-219°C	ball-shaped	88,5%	900.000 mPas

Viscosity measured with Brookfield RVT, Spindel TF 5 U/min, 25 °C

Grain size                    3 = Fine-Pitch 25-45 µm  
                                     4 = Superfine-Pitch 20-38 µm

Flux                            :    DIN EN 29454 ,1.1.3.C, DIN EN 61190-1-3, ROL0

Stencil strength            Fine-Pitch = 100-150 µm  
                                     Superfine-Pitch = 75-125µm

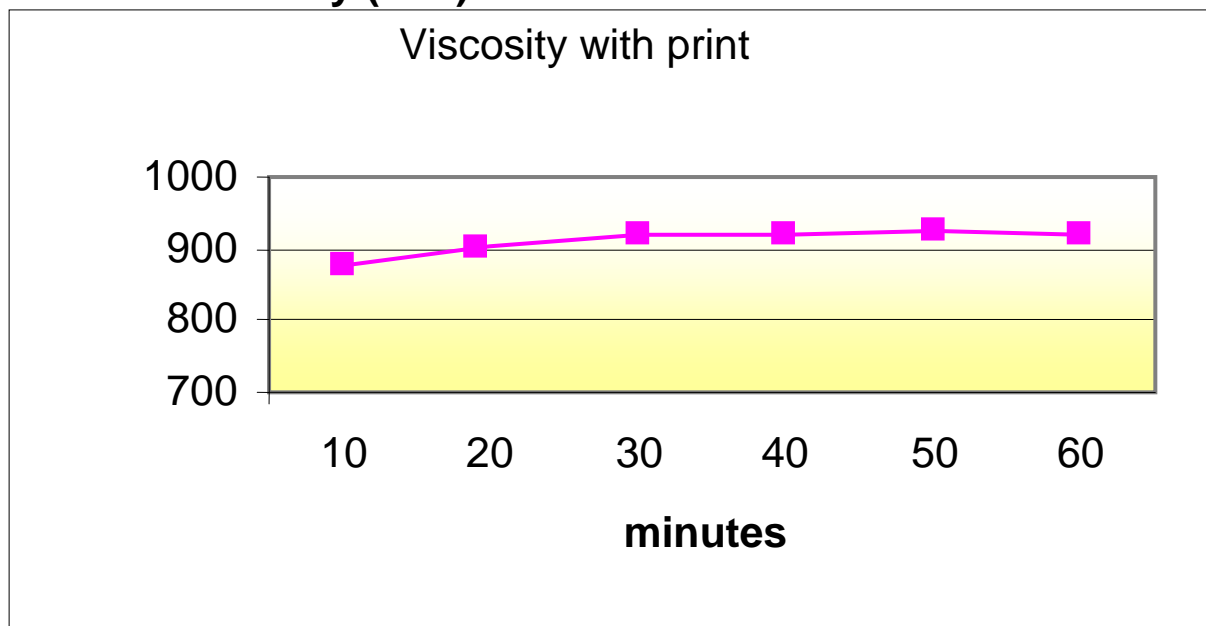
## FELDER ISO-Cream® „EL 5510“ – Lead-free, Sn96Ag+

### Organic carrier materials

The composition ISO-Cream® „EL 5510“ – lead-free – solder paste excludes on appropriate storage an encrustation extensively and guarantees the following rheological properties:

- excellent printability
- constant viscosity

### **Viscosity (Pas)**



### Advantages

- uncoloured flux residues
- little volatiles ⇒ larger cleaning intervals of the reflow oven
- real No-clean-quality
- excellent printing quality ⇒ high stencil time of at least 48 hours
- unobjectionable soldering results with all common solder profiles
- insensitive against environmental influences
- constancy of the viscosity also in printing breaks

### Washing

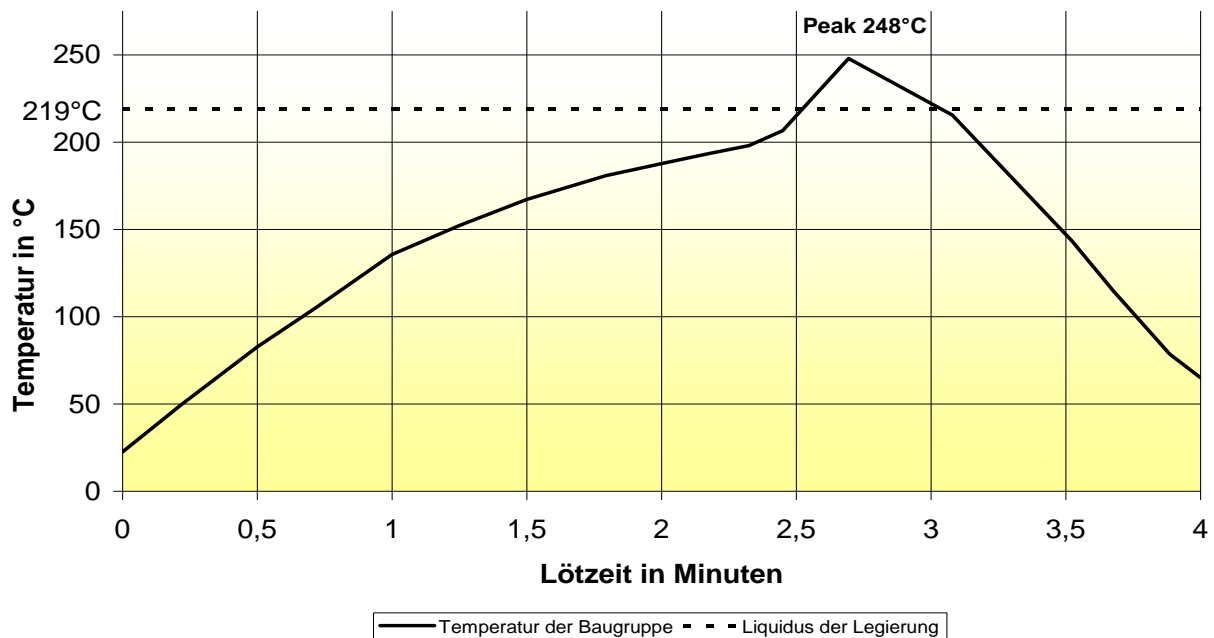
Since the solder paste reaches the highest "No-clean-level", the flux residues may remain on the soldered circuits and do not have to be washed away. Nonetheless, the residues can be removed in conventional washing plants.

## FELDER ISO-Cream® „EL 5510“ – Lead-free, Sn96Ag+

### Processing instructions

- The paste should reach room temperature before opening the jar so that there will be no condensed water on the paste.
- Before usage stir FELDER ISO-Cream® „EL 5510“ – lead-free well.
- FELDER ISO-Cream® „EL 5510“ – lead-free stays over a long period of time in its sticky consistency, which enables a trouble-free fitting of the circuits even after 48 hours. The exact period of the ambient conditions, size and form of the components as well as printing speed depends on the machine.
- The exact peak temperature depends on the warmth capacity of the components.
- FELDER ISO-Cream® „EL 5510“ – lead-free may be soldered under normal atmosphere or inert gas.
- Do not return the used solder paste (e. g. leavings of the stencil) in the jar, because the durability of the remaining paste will be reduced considerably. Keep the used solder paste separately and if necessary mix before usage with fresh solder paste.

### Recommended solder profile



Linear profile in normal atmosphere		
Heating-up up to 198°C 140sec.	198 - 248°C 20sec.	Time over solidus 35sec.

# PRODUCT INFORMATION

## FELDER ISO-Cream® „EL 5510“ – Lead-free, Sn96Ag+

FELDER ISO-Cream „EL 5510“, technical data		
Category	Results	Target/Standard
Flux content	11,5%	
Density of the paste	3,9 g/cm <sup>3</sup>	
Flux residues	Clear, uncoloured, not sticky	
Viscosity according Brookfield	900 Pas ( RVT Spindel TF, 5RPM, 25°C)	DIN EN 61189-5
Durability of the stencil	> 8 h	
Adhesiveness	min. 48 Std.	
Corrosiveness	Copper-Mirror-Test: passed (L)	IPC J-STD-004/ DIN EN 61189-6
Halide content	<0,001%	DIN EN 61189-6
Flux type	ROL0	DIN EN 61190-1-3
Surface resistance SIR	85°C/85%RF: 1,24E+12 96h	DIN EN 61189-5
Durability	6 months	

### Storage advices

Store in tightly closed containers against humidity, insolation and warmth effect. FELDER-ISO-Cream® „EL 5510“ – lead-free is storable for at least 6 months (storage at constant temperature 5 - 15 °C).

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