

Lead-free electronic solder FELDER-ISO-Tin[®] „Sn100Ni+“

Lead-free solder for wave and selective soldering units

FELDER-ISO-Tin[®] „Sn100Ni+“ Sn99,3CuNiGe
According to Fuji- Pat. No. DE19816671C2, US6179.935, JP3296289

Article no.: 5512940...

Application

Lead-free solderings in wave and selective soldering units. A usage in older wave soldering units is also possible, whose pots and nozzles are made of V2A and do not have protective gassing. The experience of our customers shows that most applications can be done without inert gas.

Properties

Beside the well-known advantages of Ni-endowed solders our alloy reaches by adding of germanium improved wetting qualities on all common surfaces in the electronic production and **lowest dross formation** in comparison to all other lead-free solders.

Alloy	Sn100Ni+ (Sn99,3CuNiGe)	Sn99,3Cu0,7
Melting temperature in °C	227 eutectic	227 eutectic
Recommended soldering temperature in °C	≥ 265-290	≥ 270-290
Density in g/cm ³	7,31	7,31
Tensile strength in N/mm ²	40	37,4
Extension in %	70	66
Hardness Hv	11,5	11
Steep strength at 80°C and 1200g load	> 3000	>3000
Spreading according to JIS Z3283 in %	73,6	72,8
Wetting time in sec.	0,88	0,91
Max. wetting in mN	1,07	1,04
Electrical conductivity in m	2,5 x 10 ⁻⁷	2,0 x 10 ⁻⁷
Thermal extension coefficient in 1/°C	23,6 x 10 ⁻⁶	21,5 x 10 ⁻⁶

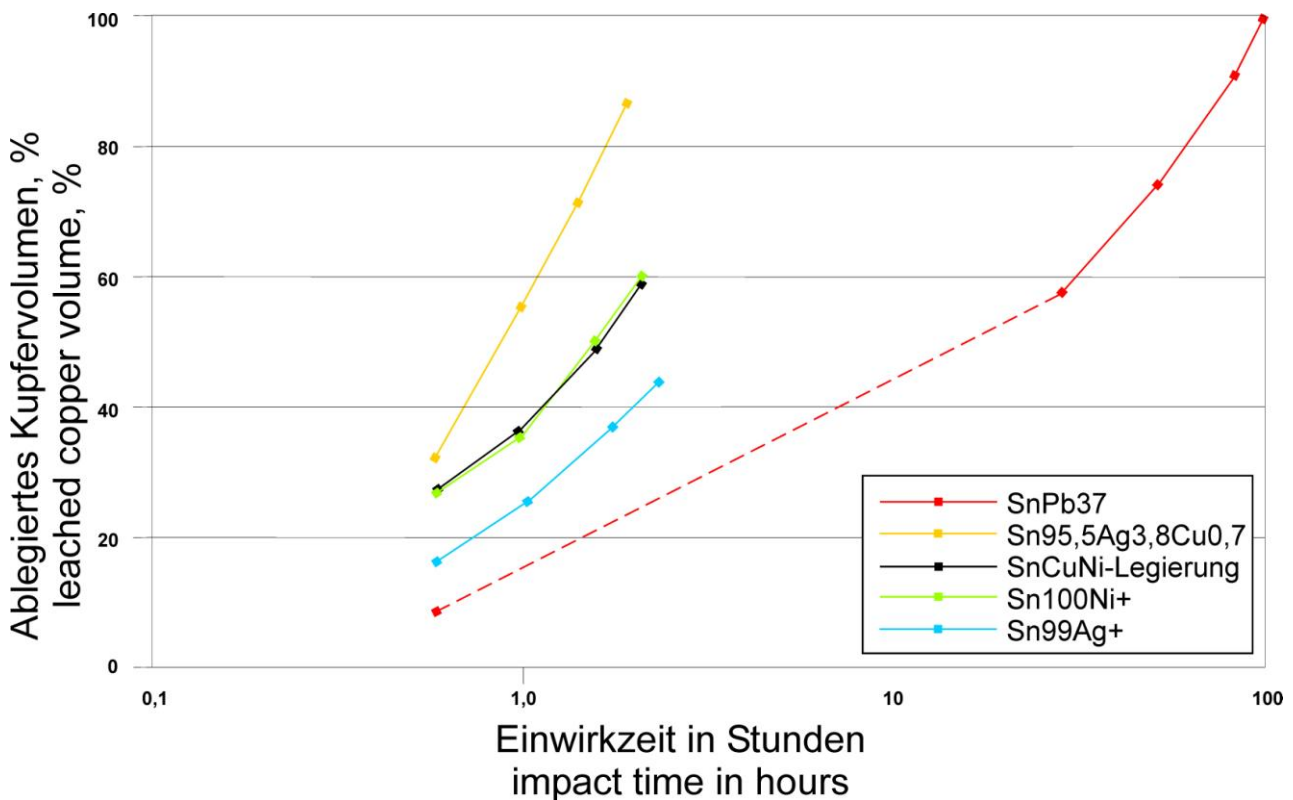
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Analysis/tolerances

Element Content (%)	Sn	Cu	Ag	Ni	Ge	Pb
	99,2±0,5	0,7±0,2	<0-0,06	0,06	0,01	max. 0,04

Element Content (%)	Al	As	Bi	Cd	Fe	Sb	Zn
	max. 0,001	max. 0,03	max. 0,05	max. 0,002	max. 0,02	max. 0,05	max. 0,001

Copper dealloying in comparison



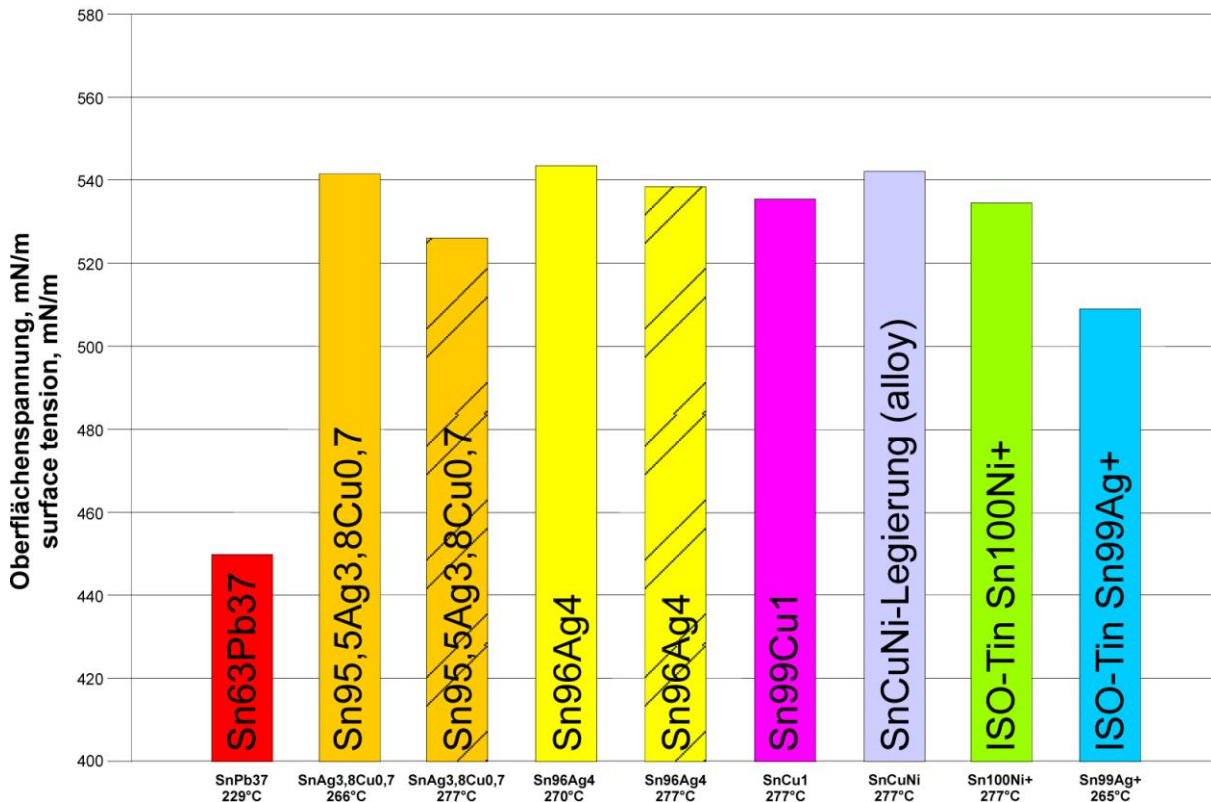
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Surface tension in comparison

Due to the low surface tension we obtain the best hole fill wetting force of all silver free alloys.

Vergleich der Oberflächenspannungen

Comparison of surface tensions



Delivery form

400 g pressed rods, 7 x 18 x 400 mm,
 3,5 kg – blocks with hanging hole 545x47x20 mm.

Also deliverable as massive wire on spools and wire cuts for first filling.

Advice

Other alloys are included in our standard delivery programme.

All information about our products are the result of our long standing experience, which we would like to pass on to our customers. Since we do not have any influence on the application with our products, please see the warranty claims in our conditions of sale because our liability is limited.