FELDER seit 1979 LÖTTECHNIK

Product Information

FELDER-ISO-Tin®, "Sn96Ag+"

Lead-free electronic solder for use in selective, wave and dip soldering systems

Sn96.43Ag3.0Cu0.5Ni0.06Ge0.01 manufactured according to the specifications of EN ISO 9453 to Fuji-Pat. No. DE19816671C2, US6179.935, JP3296289

RoHS compliant according to 2011/65/EU

Item No.: 551276....

Application

Temperature-sensitive components and circuit boards in particular require the lowest possible soldering temperatures ≤ 260°C, which cannot be achieved with conventional SnCu solders.
With the leadfree **FELDER-ISO-Tin®, "Sn96Ag+"** low wave soldering temperatures of around 255°C can be achieved, even under normal atmosphere!

Properties

Beside the well-known advantages of Ni-doped solders, our alloy achieves **improved wetting properties** on all surfaces commonly used in electronics production and **minimal dross formation** compared to all other lead-free solders through the addition of silver and germanium. A particular advantage is the **low melting temperature of 217°C**. In addition, this Ag addition leads to a further **improvement of the metal structure** of the solder joint compared to SnCuNi alloys. Another advantage of **FELDER-ISO-Tin® "Sn96Ag+"** is the **low alloying rate of copper** (up to **5 times lower** compared to conventional SnAgCu alloys).

We also offer you the option to convert your soldering bath from conventional SnCu(Ni) alloys or from **Sn100Ni+** with an Ag concentrate (**Sn90Ag10**) to **Sn96Ag+** and thus to lower process temperatures.

An "upgrade" to the silver-containing **FELDER SAC-NiGe electronic solders** can be done gradually in several steps, so that you can choose the optimal silver content for your application (0.3%, 1.2%, 3.0% or 3. 8%) can decide for themselves on site.

Analysis / tolerances

Element	Sn	Cu	Ag	Ni	Ge	Pb
Content (%)	rest	0.5 ±0.2	3.0 ±0.2	0.05 - 0.07	0.01 – 0.015	≤ 0.07

Element	Al	As	Bi	Cd	Fe	Sb	Zn
Content (%)	≤ 0.001	≤ 0.03	≤ 0.1	≤ 0.002	≤ 0.02	≤ 0.1	< 0.001

 Status: 09/24

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Summary of solder properties

metallic composition	:	3.0% Ag (+/-0.2), 0.5% Cu (+/-0.2), rest Sn
dopings	:	0.06% Ni und 0.01% Ge
Pb contamination	:	max. 0.07 %
melting range	:	217 – 219 °C
recommended solder bath temperature	:	255 – 265 °C
electrical conductivity	:	7,6 m/ Ωmm^2
density	:	7.38 g/cm^3
hardness	:	18 HB
creep strength at 80° C and 1200 g	:	> 3000 hr
thermal expansion factor	:	23.6 x 10^{-6} 1/°C

Delivery Forms

450 g (± 30 g) rods, 330x20x10 mm,
3.5 kg – blocks with hanging hole 545 x 47 x 20 mm.

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

Advices

Other alloys are included in our standard delivery program.

Storage and shelf life
Can be kept indefinitely in a constant room climate.

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