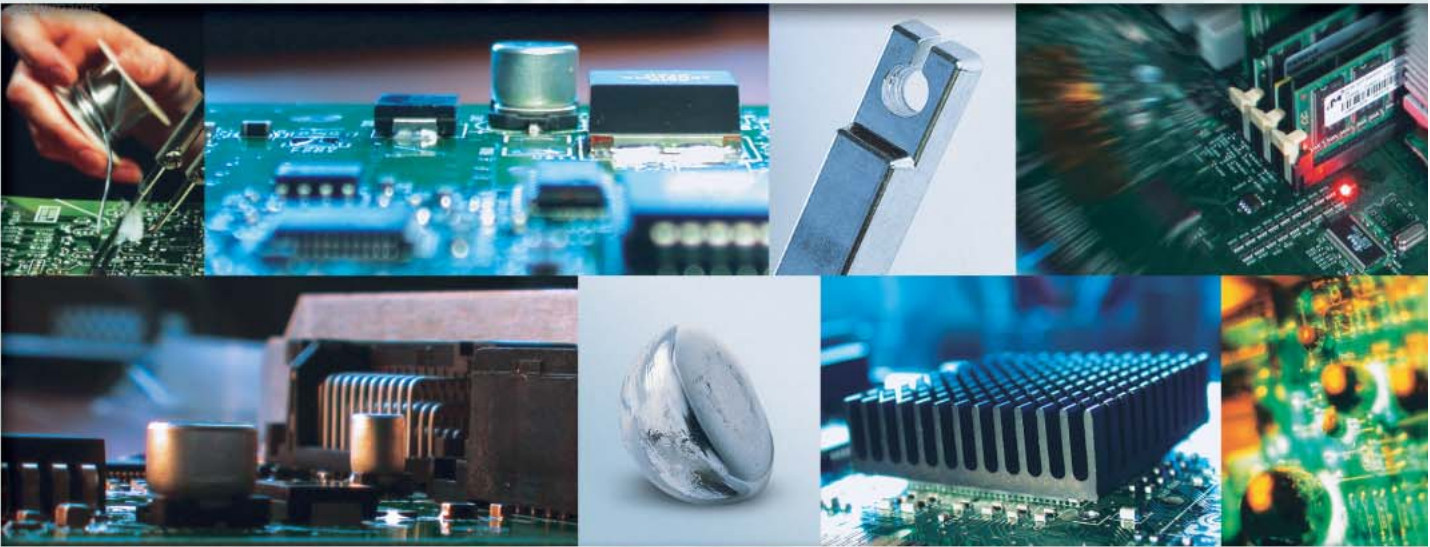


SN100C

LEAD-FREE SOLDER WITH OUTSTANDING PROPERTIES



ASIA

NORTH AMERICA

UNITED KINGDOM

CONTINENTAL EUROPE

GLOBAL PARTNERS FOR LEAD-FREE SOLDERS



Nihon Superior



FCT Assembly



DKL Metals LTD

BALVER ZINN

Josef Jost GmbH & Co. KG

THE FUTURE IS LEAD-FREE

The future is lead-free

The global electronics market is currently tackling lead-free issues. Various institutions and research departments continue to evaluate the options, meanwhile many manufacturers of electronic devices and components have already embraced lead free soldering. At the present time the *stabilised* tin/copper and tin/copper/silver (S.A.C.) systems are emerging as the most popular.

The drawback of a *basic* SnCu-eutectic alloy is that an unacceptable number of bridges and short-circuits result under normal soldering conditions. Unfortunately, this bridge formation cannot be reduced by adjusting the process parameters, e.g. by using a more active flux, a slower processing speed or appropriately-sized solder pads.

SN100C –The ideal solution

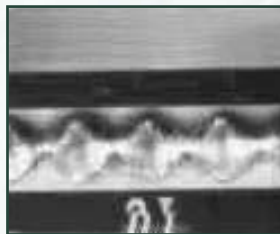
In order to ensure that the electronics industry benefits from the best possible production conditions despite the elimination of lead, Balver Zinn, DKL and FCT Assembly have joined forces with Nihon Superior to launch the SN100C range of Lead-Free solders. The innovative stabilised tin/copper solder, SN100C, has an acceptable operating temperature of 250-

260°C in wave-soldering, which eliminates the threat of thermal damage to PCBs and components. SN100C solder is a first-class performer and has the added important environmental benefits associated with lead free.

Unbeatable Performance

SN100C is ideal for state-of-the-art processes including wave-soldering, hot air levelling, hot-dip tin plating or galvanic applications. The unique stabilisation process involving nickel has an extremely positive effect on the solder's solidification behaviour. The formation of needle-like crystals is delayed and more spherical structures are encouraged. This considerably improves the flow of solder in the PCB's exit area from the wave and counteracts the formation of solder bridges. The result is a uniform structure with a shinier surface. In addition SN100C gives excellent thermal and electrical conductivity coupled with a slower rate of copper pick-up into the solder bath when compared to S.A.C. alloys. The use of SN100C results in no additional complexity to either the soldered joint or to the ease of recycling. SN100C also offers a considerable advantage in terms of cost when compared to rival silver containing alloys.

Illustration: Bridge formation

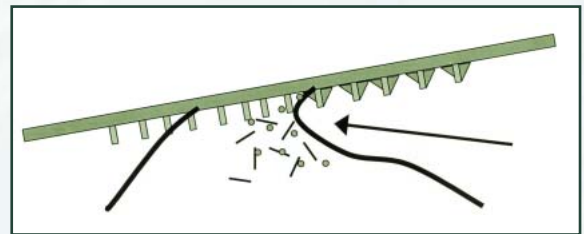


Soldered joints using standard Sn/Cu eutectic showing bridges



Comparable soldered joints using SN100C.

Diagram of board exiting solder wave



SN100C delays the formation of needle-like crystals thus promoting an improved surface structure and preventing bridge formation.

Simple Changeover

Even existing plants can be quickly and easily converted. SN100C does not lead to increased corrosion! Solder crucibles, pumps and jets should, however, be inspected thoroughly before the changeover and their usability monitored. Even more modern plants can produce better results.

Available Forms

To satisfy the widest possible range of applications SN100C is available in a variety of end forms.

- Bars
- Rods
- Wires
- Pastes
- Anodes
- Pellets
- Spheres or hemispheres
- Plates

Cast Bar



Autofeed bars



Extruded bars



Pellets, Spheres, Hemispheres



Autofeed wire



Cored solder wire



Flux



Paste

Tubs, Cartridges, syringes



BGA



We would of course be happy to produce other forms to meet your requirement subject to detailed discussion.

Applications

WAVE	REFLOW	HAL	SELECTIVE/HIGH TEMPERATURE SOLDERS	REPAIR/HAND SOLDERS
SN100C	SN96CI	SN100CL	SN100C3	SN100C
SN100Ce	SN100C	SN100CLe	SN100C4	SN97C
SN97C	LF-C2		SN100C	SN96CI
SN96C				

Physical Properties

ALLOY NAME	COMPOSITION	MELTING POINT °C	TENSILE STRENGTH 10 mm/min (Mpa)	FRACTURE STRAIN %
SN100C/Ce/CL/CLe	Sn Cu0,7 Ni	227	32	48
SN96C/SN96CI	Sn Ag3,8 Cu 1,0	217	52	27
SN97C	Sn Ag3,0 Cu0,5	218-219	50	32
LF-C2	Sn Ag3,8 Cu1,0 Bi3	208-213	50	25

(Patented alloys)

SN100C

Successfully tried and tested

More and more leading companies in electronics and PCB fabrication are using the SN100C range with outstanding results. To date tens of millions of PCBs have been produced using the SN100C family of solders. Examples can be found in a wide range of consumer electronic products from notebooks to air conditioning systems.

Many of the devices soldered with SN100C have already been in use for over three years and so far there have been no reported failures attributable to the use of lead-free solder. Furthermore the use of SN100C means your company will no longer be concerned with the environmental issues of soldering processes involving lead.



Seamless changeover

Benefit from our expertise. We will support you from changeover right through to the optimisation of your soldering process. We look forward to working with you soon.

Contact us to discuss "your lead free future".



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