

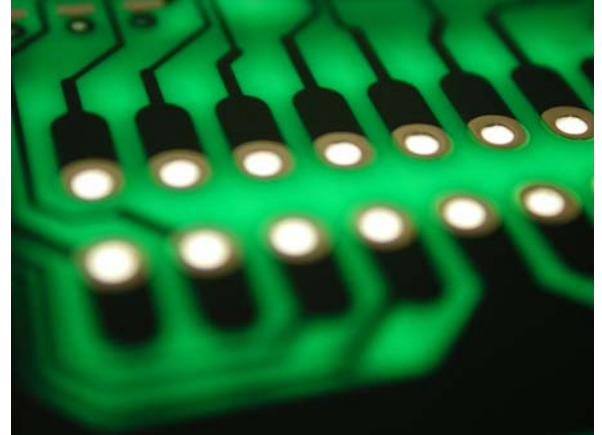


SN100CL LEAD-FREE HOT AIR LEVELLING SOLDER

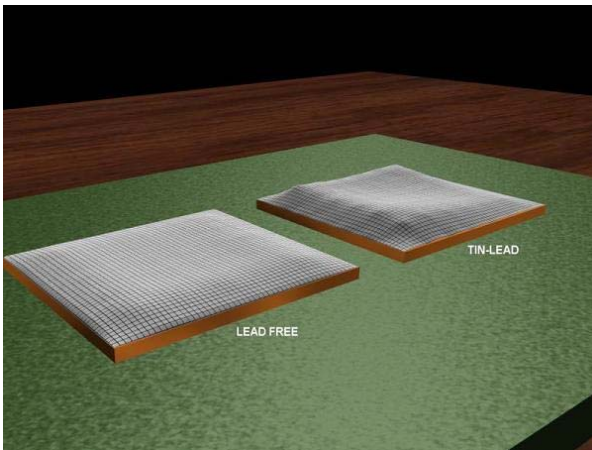
(Tin/Copper/Nickel/Germanium)

Clear through-holes and smooth bright pads on hot air levelled boards at a solder pot temperature of 260°C are possible with Nihon Superior's SN100CL. Over 12 years of commercial production experience has confirmed that boards hot air levelled with SN100CL can provide the long shelf life from a lead-free board finish that the electronics industry has been waiting for.

- Good wetting of the board surface at 260°C
- Smooth bright finish on pads and hole walls
- Smooth coverage of pads and hole walls
- Compatible with both tin/lead and lead free final assembly
- Bridge-free coating of 0.8mm pitch pads
- Good hole clearance
- Uniform coating thickness of 4-24µm for long extended solderability
- Uniform coating on pads and hole walls, even on the shoulder
- For use in both horizontal and vertical HASL machines



Board hot air levelled with SN100CL



Improved flatness with SN100CL

Description

SN100CL has been developed and patented by Nihon Superior Co. Ltd of Japan for use in both vertical and horizontal HASL machines. This unique alloy offers the user a viable, low cost, lead-free solder producing a more uniform, flat finish than was achievable with tin/lead.

The higher operating temperatures may require equipment upgrades and we recommend you contact your machine supplier for advice.

Process Control

As the SN100CL solder bath is used, copper will dissolve into the solder from the bare board. If the copper content of the solder bath exceeds 1.20% there is likely to be an increase in the incidence of bridges and overall graininess. In order to maintain the proper copper level in the bath, DKL Metals offer Nihon Superior SN100Cle as the top up alloy. The recommended operating window for copper is between 0.85% and 1.0%.

Verification of bath copper content is easy with our free solder bath analysis programme which gives you a full analysis report allowing you to track copper and other contaminant levels.

Copper levels may need to be further reduced by partial removal of solder from the bath and dilution with fresh alloy. "Drossing" to remove copper is also possible but unlike with tin/lead the copper typically settles at the bottom of the pot. Please contact us for advice on which system is best for your requirements

Alloy Specification:

Element	Typical SN100CL	Typical SN100CLe	Recommended T.A.L.
Tin (Sn)	Bal	Bal	Bal
Copper (Cu)	0.65	<0.20	1.2
Nickel (Ni)	0.060	>0.050	<0.04 or >0.08
Zinc (Zn)	<0.0005	<0.0005	0.005
Silver (Ag)	0.001	0.001	0.05
Antimony (Sb)	0.010	0.010	0.05
Lead (Pb)	0.02	0.02	0.1
Cadmium (Cd)	0.0001	0.0001	0.005
Bismuth (Bi)	0.002	0.002	0.05
Iron (Fe)	0.003	0.003	0.02
Arsenic (As)	0.001	0.001	0.05
Aluminium (Al)	<0.0001	<0.0001	0.002
Gold (Au)	0.0002	0.0002	0.080

Availability

STYLE	NOM. WEIGHT	DIMENSIONS	PACKING
Bar	1kg	300 x 32 x 12mm	20kg Carton
Autofeed Ingot	4kg	500 x 45 x 33mm	Ingot
Chunks (chopped bar)	-	-	20kg Tub

Please contact us with any specific non standard bar or ingot size to check on availability.

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