

BLT Circuit Services Ltd
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NCS/900 No Clean, Fine Pitch, Pin Testable Solder Paste

Description

BLT NCS/900 solder paste has been formulated to provide manufacturers with a product that offers a wide process window whilst maintaining excellent solderability and process yield.

Following are some of the benefits and product characteristics;

- Long tack life greater than 3 days.
- Excellent print open time even during long periods of inactivity.
- Fine pitch down to 0.3mm.
- Soft, pin testable transparent post re-flow residue.
- Effective over a wide range of re-flow profiles.
- Resists solder balling and slump.
- Stable at high ambient temperature up to 35°C.
- Unrefrigerated Storage greater than 8 weeks possible up to 21-23C
- High print speeds up to 150mm/sec applicable.

Typical Specifications and Test Results.

	NCS900
Alloy	62Sn, 36Pb, 2Ag.
Flux Type & content	9.5% RMA
Particle size	20-38 microns
Alloy melting temp'	179-190°C
Viscosity (cP)	650 (25°C)
Slump (room temp)	0.2mm (0.7mm pads)
Tack time	>72 hours
Copper mirror test to Bellcore GR78 & QQ-S-571E	Pass
Surface insulation resistance 85°C & 85% RH, J-STD004 (ROL1) JIS Z3284	5 x 10 ⁸ (168hrs).
Halide Content. JIS Z 3197 6.5/1	<0.05%
Migration test GR-78 Core Issue 1	Pass
Corrosion IPC-SF- 818	Pass



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Application

Note. **NCS/900** should be stirred gently, after allowing the product to warm to room temperature, before use.

a) Equipment & Printing

NCS/900 can be used with Etched, Electroformed or laser cut stencils, thickness 0.006”–0.010” with aperture reductions of 5-10%, using manual, semi or fully automatic machines.

Squeegees should be set at 60° for highest print definition and pressure should be set so that the stencil is relatively clean after each print pass.

High squeegee pressures are not required allowing second side printing. Lift off should be as soon as possible after printing, preferably vertically.

Print speed 20-150mm/sec.

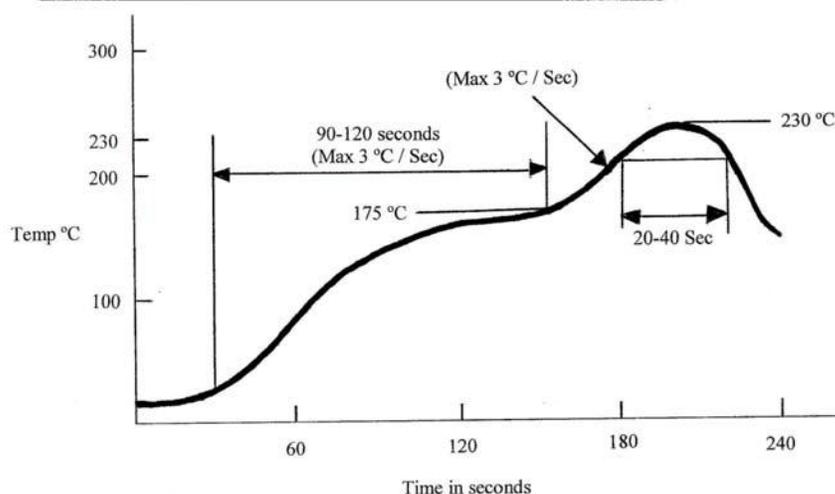
Continuous printing up to 8 hours with max. 1 hour inactivity time is possible.

b) Re-Flow

Following is a typical re-flow profile. However **NCS/900** can be used over a wide range of profiles to suit the characteristics of the board, components and oven.

Guidance notes. Initial ramp max 3°C per second, 90-120 sec to 175°C. Second ramp to 230°C should be max 3°C per second and should be kept below 30 secs to reduce the risk of solder balling. Re-flow at 220–230°C for 20-40 secs. Excessive time above re-flow temperature will cause dull finish and residue discolouration. Cooling at 3°C per second is recommended. Too rapid cooling can damage the circuit or components and too slow cooling will cause crystalline joints.

NCS/900 Typical Re-Flow Profile





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c) Equipment & Circuit Cleaning

Equipment. **BLT** manufactures a range of aqueous and solvent cleaners and machines for stencils and misprinted boards. **SCS/1** and **SCS/2** are particularly recommended for use with **NCS/900 solder paste**.

Circuits. Post cleaning is not normally required for **NCS/900** but should absolute cleanliness be required then **Circuitwash 2000** are recommended.

d) Storage & Handling

Shelf life is 6 months in sealed container at 5-10°C.

NCS/900 can be stored at room temperatures 21C – 23C for over 8 weeks without loss of performance. Store away from direct heat source and sunlight.

NCS/900 contains lead and modified rosin.

Refer to separate Health and Safety data sheets NCS/900/16/2.

Warranty

All reasonable endeavors have been made to ensure that the information contained in this data sheet is accurate, but it is submitted on the express condition that BLT Circuit Services Ltd. shall be under no liability whatsoever in respect thereof or for any loss, injury, damage or liability of whatsoever nature arising, suffered or incurred as a consequence of its use.