SRA SOLDER PASTE SSLTNC

♦**No-Clean** ♦ **Class 5 Alloy: 42Sn/57Bi/1Ag**

♦ **Type 5 Powder: -500 Mesh Powder** ♦ **Metal Content: 87-90%**

- ◈ Residues and characteristics pass Bellcore.
- ◈ Meets IPC requirements for ROL0, No-Clean.
- ◈ Superior wetting characteristics, lot-to-lot consistency, and stable viscosity
- ◈ Halide-free, halogen-free
- ◈ Capable of printing 12 mil pitch
- ◈ Post-solder joints are pin-testable
- ◈ For Nitrogen or air atmosphere reflow ovens
- ◈ Translucent residue
- ◈ No slump
- ◈ Long tack time
- ◈ Air reflow
- ◈ Viscosity is 650,000 – 750,000 kcps*

** Viscosity can be adjusted to meet process requirements.*

RECOMMENDED PROCESSING GUIDELINES

I. PRINTING

Tack Time for ***SRA Solder Paste SSLTNC*** is sixteen (16) hours between printing, placement and reflow under ambient conditions below 23°C/74°F and a relative humidity below 60%. The exact time will depend on the environmental condition of the solder paste and plant. The ideal temperature range for operation of the solder paste is 20°C/68°F – 23° C/74°F, with a relative humidity of 35-55%. The viscosity of this solder paste is 225,000 to 450,000 kcps on the Brookfield viscometer.

Should printed circuit boards need to be stored for more than 6 hours after populating, prior to reflow, it is recommended that PCBs are maintained in a tightly controlled area. Humidity should be controlled between 35% - 55% and temperature should not exceed 23°C/74°F.

II. RECOMMENDED REFLOW PARAMETERS

42Sn/57Bi/1Ag in No-Clean Formulations

PREHEAT ZONE: Ramp to 100°C at a rate of 1-3°C per second to dry the volatiles from the solder paste.
SOAK ZONE: Ramp from 100-120°C at a rate of 0.3-0.7°C per second to get uniform temperature equilibrium of PCB.
REFLOW ZONE: 1) Ramp from a temperature of 120°C to 165°C for a period of 30 - 80 seconds*.
* Time above 138°C should not exceed 45 seconds.

COOLING ZONE: A cool down rate of 2°C, or more, per second is recommended for optimum results.

CLEANING LAG TIME: Cleaning efficiency is not affected by a lag time between reflow soldering and the cleaning process.

III. POST-SOLDER CLEANING

SRA Solder Paste SSLTNC is a No-Clean paste formulated to remain on PCBs after reflow. While no post-solder cleaning is required for the residue, all residues may be removed using ***SRA TruPower #35*** in an aqueous cleaning process.

Wet solder paste is easiest to remove using isopropanol or other similar solvents. If printing interval exceeds two (2) hours, remove solder paste from screen stencil and store in a separate container.

IV. STENCIL CLEANING

Stencils should be cleaned using a semi-automated stencil cleaning system, hand wipes, or by hand-wiping the stencils with isopropanol and/or other alcohol solvents.

V. STORAGE

The following conditions are recommended to achieve long-term stability and the assurance of fresh solder paste:

- ▪ To achieve **2 year** storage life, store in a refrigerator, **1°C/33°F-12C/55°F**.
- ▪ For non-refrigerated/frozen storage, maintain in a cool and dry location. Maximum temperature should not exceed **23°C/75°F**. A storage time of up to **6 months** can be expected.
- ▪ Avoid direct sunlight.

VI. SAFETY

SRA Solder Paste SSLTNC is a product formulated for use in assembly processes that require safety precautions be taken. Avoid contact with skin and eyes. When using, do not eat, drink, or smoke. Wear gloves and eye protection. Most alloys contain lead; wash hands if hands come in contact with the product.

Observe industrial hygiene and safety practices to assure conformance with local, state, and federal safety health and environmental regulations.

Adequate ventilation should be provided when soldering. Refer to the Material Safety Data Sheet (MSDS) for additional information.

VII. PACKAGING

- Jars of 50 or 250 grams available. 90% Metal
- Syringes available in 5cc (15 grams) and 10cc (35 grams) sizes. 87% Metal

VIII. TECHNICAL TEST DATA

QQS-571E		ANSI/IPC SF-818	
Resistivity of Water Extract:	*Pass*	**Copper Mirror Test:**	*Pass*
Silver Chromate Paper Test:	*Pass*	**Silver Chromate Test:**	*Pass*
Copper Mirror Test:	*Pass*	**Solids Content, Alloy:**	*90%*
		Flux residual solid after reflow:	*3.3%*
		Halide Content:	*-0-*

Bellcore (TR-NWT-000078)		ANSI/IPC SP-819	
Halogen Content:	*-0-*	**Solder Ball Test:**	*Pass*
Copper Mirror Test	*Pass*	**Wetting Test:**	*Pass*
Surface Insulation Resistance Test	*$>1X10^{10}$*	**Slump:**	*-0-*
	Class 3	**Alloy conforms to Mil-STD-45662 and Mil-I-45208**	

DISCLAIMER

The information contained herein is based on data considered to be accurate and is intended for use by persons having technical skills, at their own discretion and risk. Since conditions of use are outside of SRA Soldering Products control, we cannot assume liability for results obtained or damage incurred due to misuse, nor can we assume customer liability.

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