BOW NC-1175
No-Clean Solder Paste

Product Description

- Exceptional print definition
- Long stencil life
- Wide process window
- Excellent wetting on most board finished
- Clear Residues
- Low Voiding
- Compatible with enclosed printing heads
- IPC Flux Classification REL0

Alloys

Manufactured with low-oxide, spherical and uniformly sized powder. Bow NC-1175 is available in the following alloys: Sn63/Pb37, Sn62/Pb36/Ag2, Sn60/Pb40, Sn43/Pb43/Bi14, Sn42/Bi58, Sn10/Pb90 and Sn10/Pb88/Ag2 alloys.

Powder Distribution

Micron Size	Type	Pitch Requirements
75 – 45	Type 2	24 mil & above
45 – 25	Type 3	16 mil to 24 mil
38 – 20	Type 4	12 mil to 16 mil

Micron Size	Type	Pitch Requirements
25 – 15	Type 5	< 12 mil
15 - 5	Type 6	< 8 mil

Available Packaging

The following packaging options are available for stencil printing and dispensing applications: 250g and 500g jars; 250g and 700g cartridges; 750g ProFlow® cassettes, 35g and 100g syringes.

Stencil Life

- >8 hrs. @ 30-45% RH & 22-25°C
- ≈ 4 hrs. @ 45-75% RH & 22-25°C

Viscosity

Printing applications: 900 to 1200 Kcps +/- 10%
Dispensing applications: 425 Kcps +/- 10%
Tested according to IPC-TM-650

Tack Value

Typical tackiness 54g force

Printing

The print definition of Bow NC-1175 is ideal for fine pitch applications. The stencil life of this no-clean product virtually eliminates waste of solder paste. Consult the powder distribution chart to determine your mesh size requirements.

Printer Operation

The following are general guidelines for stencil printer optimization with Bow NC-1175. Some adjustments may be necessary based on your process requirements.

- Print Speed: 25-100 mm/sec
- Squeegee Pressure: 0.2-0.7 kg/inch of blade
- Under Stencil Wipe: Once every 10-25 prints or as necessary.

Stencil Cleaning

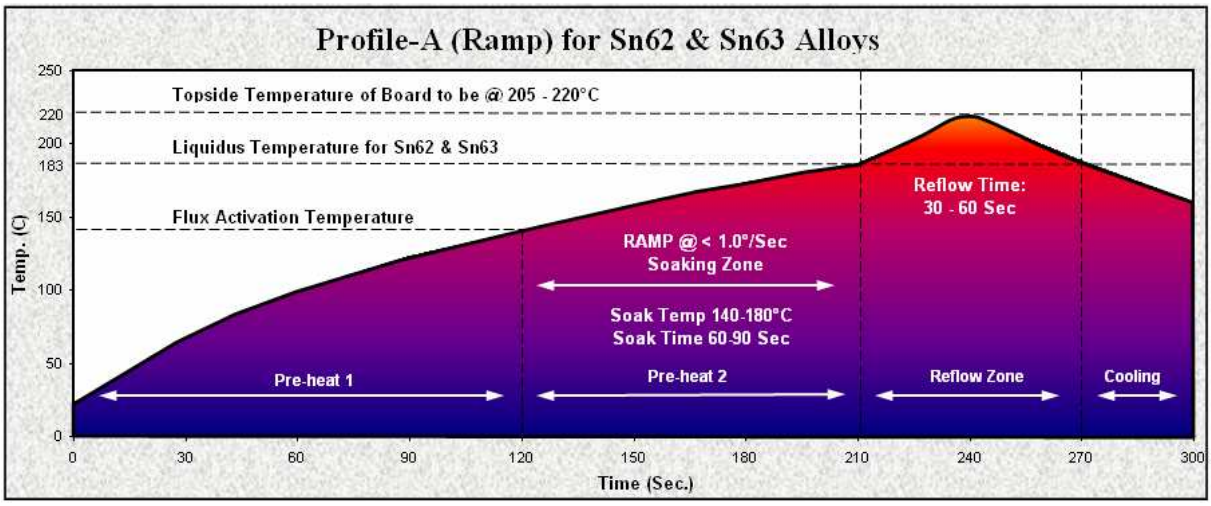
Automated stencil cleaning systems for both stencil and misprinted boards. Manual cleaning using 99% isopropyl alcohol (IPA) is recommended.

Storage and Handling Procedures

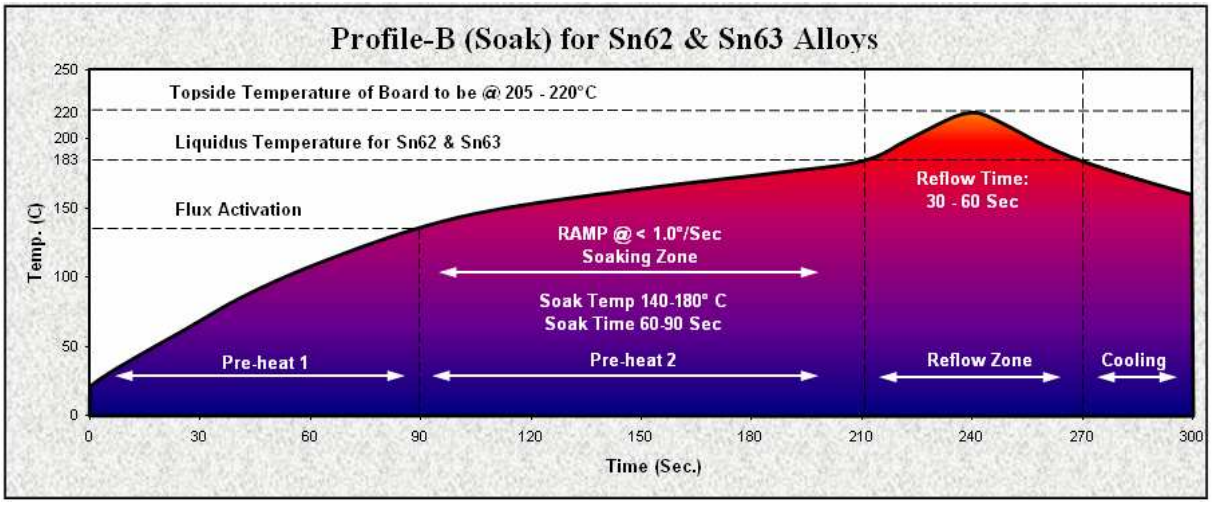
Refrigerated storage at 42-47° F will prolong the solder paste shelf life to no longer than 6 months. Syringes & cartridges should be stored vertically with the dispensing tip down. Solder paste should be allowed to reach ambient temperature naturally, prior to use (about 6-8 hours). NEVER FREEZE SOLDER PASTE.

Recommended Profiles:

Profile-A was designed to serve as a starting position for process optimization using Bow NC-1175. A cool down rate of (-) 2-4 C°/second is ideal for the formation of a fine grain structure without risking damage to thermally sensitive components.



Profile-B utilizing a soak of up to two minutes at 155°C may help to minimize voiding in BGA assembles. This will allow more time for solvent components of the solder paste to outgas prior to reflow.



J-STD-004 (IPC-TM-650) Test Results:

Bow NC-1175 No Clean Solder Paste			
Test	**Standard**	**Values**	**Results**
Flux Designation	IPC-TM-650 2.3.35	N/A	REL0
Copper Mirror	IPC-TM-650 2.3.32	N/A	Pass
Silver Chromate	IPC-TM-650 2.3.33	N/A	Pass
SIR Test	IPC-TM-650 2.6.3.3	2.66E + 10	Pass

Refer to the MSDS for additional safety information.

The information contained herein is based on data consideration 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 Bow Electronics control, we cannot assume liability for results obtained or damage incurred due to misuse, nor can we assume customer liability.

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