



BOW ELECTRONIC SOLDERS

BOW RA-560 Rosin Activated Solder Paste

General Information

Bow RA-560 is a solder paste conforming to J-STD-004, ROH1. It is specially designed for today's SMT applications. It is a homogeneous mixture of the highest quality pre-alloyed solder powders and activated resin paste flux. With a special blend of gelling additives in this formulation, it prevents segregation of solder cream and provides a creamy mixture ready for application. The residue from Bow RA-560 is light amber & clear of solder balls.

The solder paste is specially developed with a non-hygroscopic activator system, which not only gives excellent solderability but also is less susceptible to humidity. Its residue is corrosive and therefore must be cleaned. Bow RA-560 uses modified rosin, which after reflow gives, much lighter residue than traditional "RA" solder pastes. It is therefore cosmetically more acceptable to inspection prior to cleaning.

The solder paste is available in a wide range of solder alloys, metal percent loadings, and mesh sizes which give desired properties to meet different applications.

Powder Distribution

With the selection of fine mesh powders such as -325/+500, it can be used for fine pitch assembly application. For ultra fine pitch assembly we recommend our -400/+500 mesh powder.

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; 650g ProFlow® cassettes, 35g and 100g syringes.

Stencil Life

For ideal stencil life and printing performance, the environment should have a temperature between 68 - 77° F (20 - 25°C) and relative humidity less than 65%.

Printing

The print definition of Bow RA-560 is ideal for fine pitch applications. The stencil life of this rosin activated product virtually eliminates the 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 RA-560. Some adjustments may be necessary based on your process requirements.

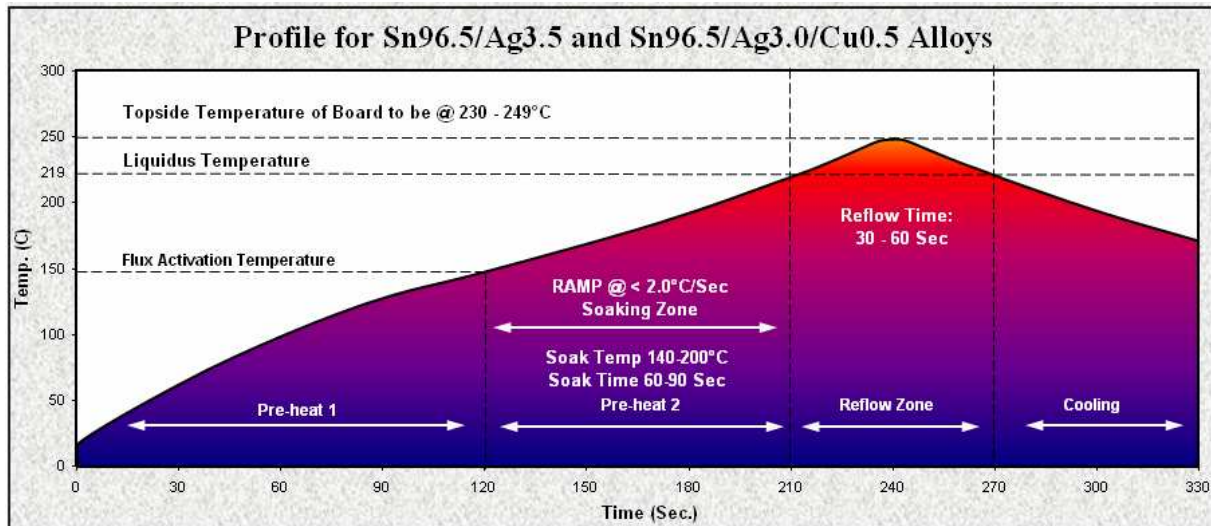
- Print Speed: 25-40 mm/sec
- Squeegee Pressure: 0.2-0.7 kg/inch of blade
- Under Stencil Wipe: Once every 10-25 prints or as necessary.

Stencil Cleaning

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

Recommended Profiles

The profile was designed to serve as a starting position for process optimization using Bow RA-560. 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.



Cleaning Process

As this solder paste is classified as RA, its residue cannot be safely left on the board without cleaning. When cleaning, fluorinated or chlorinated solvents or other traditional rosin cleaning solvents can be used. Saponifiers or semi-aqueous methods will also remove the residues.

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.

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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