

Description product

The Intrusol BSA04 is a low melting halogen and halide free no clean lead-free solder paste. The BSA04 alloy is near eutectic Tin Bismuth based alloy. BSA04 stands for the alloy Sn57.6Bi0.4Ag alloy with powder type 3. The alloy is also suitable for pin in paste applications. See the Product Data Sheet (PDS) for the technical data of this product. An up to date version of the PDS for most current products is available through our website at <http://www.cobar.com> See the Material Safety Data Sheet (MSDS) before handling and/or using this product.

Receiving and storage

1. Do not leave shipping containers on the loading dock or other locations. The shipping container is only designed to protect the material during transit up to 4 days.
2. Store unopened in a refrigerator, when products will not be used or inspected within the next few days. Recommended storage temperature is 4-10 °C. Temperatures below 4 °C, however, should be avoided. In any case, storage temperatures should not exceed 22-25 °C. Cartridges should be stored in a horizontal position. To eliminate flux segregation it is advised to rotate the cartridges once a month.

Handling

Allow minimum 8 hours for jars and their contents to reach the ambient temperature. DO NOT open frozen/cold containers as moisture may condense on the product and affect performance. Do not place it on a hot plate, furnace, reflow oven or any other artificial means to warm. Stir the material for 1 minute with a steel spatula (or equivalent). This practice homogenizes the product and prepares it for immediate test. Solder paste is a shelf-life item and should be managed as a FIFO-supply. DO NOT store new and used paste in the same container. Keep the jars tightly sealed when not used.

Print recommendations

Use a squeegee with a minimum necessary length. Recommended is to have 25 mm (1 ") on both sides of the print pattern. Apply 10 gram/cm of squeegee length on the stencil. The stroke of the squeegee should start and end 50 mm (2") before/after print pattern to allow the paste to roll properly. Printer settings depend on print equipment, stencil materials and temperature. General recommended settings:

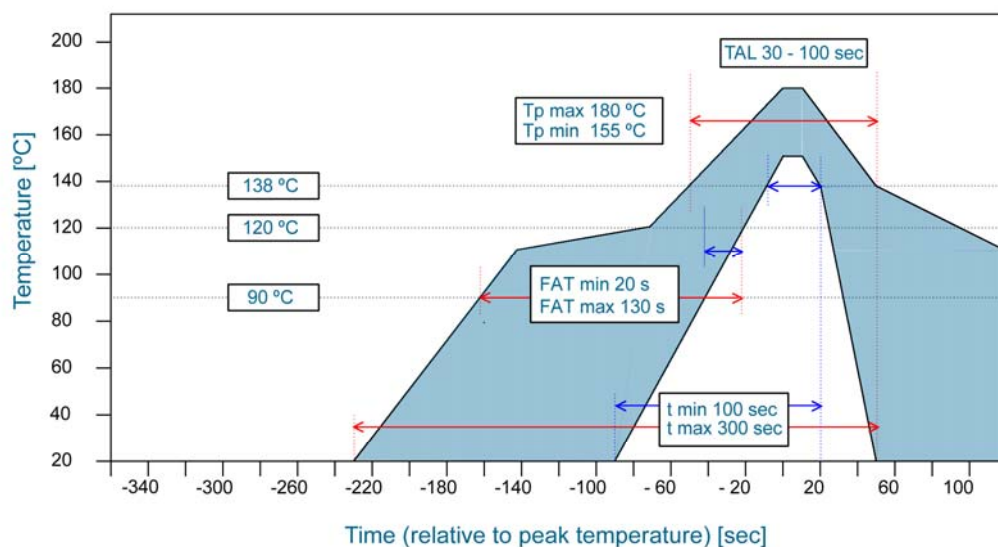
Print speed [mm/s]	Squeegee pressure [kg/cm] @ 23 °C
25 – 80	0.20 (0.50 kg/inch)
80 – 140	0.25 (0.65 kg/inch)

Decrease pressure by 5% per 1 °C higher temperature.
For typical pcb's: separation speed 10 mm/s. For the MPM machines step 6 of slow-mode.

Recommended operating temperature is between 22-28 °C and 30-70 %RH.
In case no printing has been done for more than four hours, it is highly recommended to perform a total stencil cleaning prior to re-start.

Reflow profile

The printed boards can be reflowed up to 8 hours after printing without adverse effects. The recommended profile can only be considered as a guideline for the initial setting of the equipment. It is not strictly necessary to set up a profile with a distinct soak-zone. One continuous ramp with a controlled slope of increase of 1 °C/sec up to 160 °C has yielded good reflow results.



FAT = Flux Activation Time
TAL = Time Above Liquidus
Tp = Peak Temperature

Residues/cleaning

Intrusol BSA04 is a no-clean formula. This solder paste features minimal amounts of residues, which are non-corrosive and have excellent dielectric properties. Therefore they are meant to be left on the assemblies in most of the applications.

The residues on stencil, spatulas and other tools as well as misprints may be cleaned with cleaner MCI-2330.

Disclaimer:

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