

Solder Pastes

F10C Series

No Clean

Description:

The F10C Series solder pastes are ready to use homogenous mixtures consisting of fully alloyed metal powders, binders, solvents and thixotropic agents for surface mount assembly applications. These pastes provide excellent wetting and leave behind a transparent residue that may be left on the circuit board. The F10C Series pastes can be reflowed in air or N₂ and feature an ultra low odor level. The printing capabilities of these solder pastes are unsurpassed.

● Key Benefits:

- Exceptional print to print consistency
- Excellent wetting
- Low odor
- Passes IPC requirements for class 3 no clean pastes per J-STD-004
- 8 hour tack and work life

● Physical Properties:**Metal Powder:**

Type 3 = -325/+500 mesh (25-45 μm)
Type 4 = -400/+500 mesh (25-38 μm)

Shape:

Spherical

Melting Point:

Sn63/Pb37 (183°C)
Sn62/Pb36/Ag2 (179°C)

% Metal:

Stencil Printable - 90 %

Viscosity Range:

M = 600-800 Kcps
H = 800-1000 Kcps
Brookfield RVT, TF spindle, 5 rpm at 25°C.

● Performance Properties:**Printing Data:**

Typical Print Thickness
20-25 mil pitch: 0.006" – 0.008" (150 – 200 microns)
<20 mil pitch: 0.004" (100 microns)

Minimum Pitch:

16 mil (400 microns) with type 3 mesh powder

Minimum Pad Width:

8 mil (200 microns) with type 3 mesh powder

Slump:

Per J-STD-005
10 min @ 25°C
10 min @ 150°C
No bridging at 0.075mm spacing

Solder Balling:

Per J-STD-005
Preferred (no solder balls)

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- **Residue Properties:**

Flux Activity:

According to IPC-SF-818, J-STD-004
Class L

Copper Mirror:

Per IPC-SF-818, J-STD-004
Pass

Silver Chromate Test Paper:

Per IPC-SF-818, J-STD-004
Pass

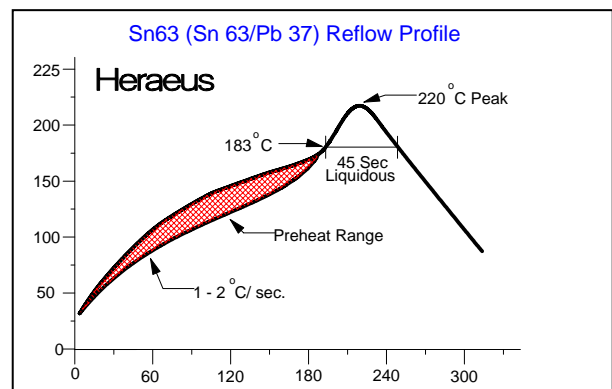
- **Recommended Processing Guidelines:**

Cleaning:

The flux residues may remain on the circuit. They do not need to be cleaned.

Clean wet paste with isopropanol or similar solvents.

Typical Sn63/Pb37 Reflow Profile



If the printing interval exceeds 1 hour, remove the paste from the stencil.

The printed solder paste remains tacky for up to 8 hours to allow device insertion. The exact time depends on environmental conditions.

If the printed circuit boards will be stored for more than 6 hours after populating and prior to reflow, it is advisable to store the boards in a tightly closed area. This is especially important if the humidity exceeds 65%. Humidity should ideally be controlled between 45-65%.

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Reflow Parameters:

For optimum results, the paste should be reflowed at a peak temperature of 30-50°C above the liquidus temperature of the alloy. Time above liquidus should be maintained for 30-60 seconds. Heating should be uniform across the substrate and components. Reflow can be accomplished with any industry-accepted process.

Packaging:

Available in 250, 500 and 1000 gram jars
6 ounce, 12 ounce and ProFlow™ cartridges

Storage:

Store in refrigeration at 5-12°C. Avoid direct sunlight and temperatures exceeding 35°C. Allow paste to come to room temperature for a minimum of 2 hours prior to opening. Store cartridges vertically with the tips down.

Safety:

When using do not eat, drink or smoke.
Avoid contact with skin and eyes.
Wear suitable gloves and eye protection.
Contains lead!

Warranty:

Material guaranteed to meet specifications for 6 months from date of shipment.

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