

Technical Data Sheet

Solder Paste Series F 10C

No Clean Paste

1. 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

<ul style="list-style-type: none"> • Exceptional print to print consistency • Excellent wetting 	<ul style="list-style-type: none"> • Passes IPC requirements for class 3 no clean pastes per J-STD-004A 	<ul style="list-style-type: none"> • 8 hour tack and work life • Low odor
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2. Product Name

Flux Series:	F10 C
Alloy:	Sn63 = Sn63/Pb37 Sn62 = Sn62/Pb36/Ag2 AT = Sn6/Pb7+.04%

3. Physical Properties

Metal powder:

Particle size:	Particle Size Chart		
	Mesh Size	Microns Size	Particle Type
	-325 +500	45-25	3
	-400 +500	38-20	4

Shape:	Spherical
Melting Point:	Sn63 = Sn63/Pb37 (183°C) Sn62 = Sn62/Pb36/Ag2 (179°C) AT = Sn6/Pb7+.04%

Solder Paste:

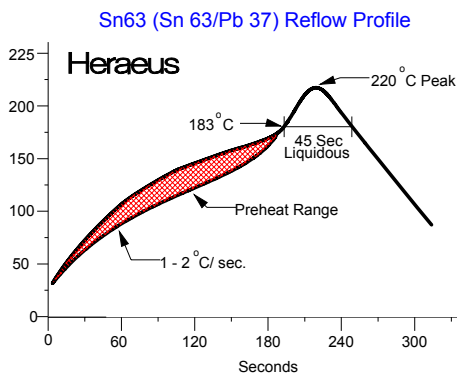
Metal Content:	Standard 90% ± 1%
Flux Content:	10 +/- 1%
Viscosity Range: (Brookfield RVT, TF spindle, 5 rpm. @ 25°C)	H: 800-1000 Kcps M: 600-800 Kcps

4. Performance Properties

Solder Ball Test: Per IPC-TM-650 2.4.43	Pass
Hot Slump : Per IPC-TM-650 2.4.35	Pass
Wetting: Per IPC-TM-650 2.4.45	Pass
Typical Print Thickness:	≥ 0.5 mm pitch: 150 – 200 microns <0.5 mm pitch: 100 - 125 microns
Minimum Pitch:	0.4 mm with type 4 mesh powder
Minimum Aperture Width:	200 microns with type 4 mesh powder

5. Reflow Parameters (recommendation)

- For optimum results, the paste should be reflowed at a peak temperature of 20-30°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.
- Reflow at or below 200ppm O₂ for type 5 or smaller powder.



6. Residue Properties

Flux Activity: According to J-STD-004A	Class L0
SIR: Per J-STD-004A	> 1 x 10 ⁸ , Class 3
Per Bellcore TR-NWT-000078 issue 3	> 2x10 ⁴ megohms
Electromigration : Per J-STD-004A	Pass
Copper Mirror: Per J-STD-004A	Pass
Silver Chromate Test Paper: Per J-STD-004A	Pass

7. Recommended Processing Guidelines

Cleaning:

- The flux residues may remain on the circuit. They do not need to be cleaned.
- If cleaning is required, the residues may be cleaned in solvents such as: freon and semiaqueous solvents.
- Clean wet paste with isopropanol or similar solvents. If the printing interval exceeds 1 hour, remove the paste from the stencil.

Printing:

- For optimum performance, temperature should be between 23-27°C

General Cleaning:

- For equipment and stencil cleaning IPA, Acetone or similar solvent can be used.

8. Packaging

- Available in 250, 500 and 1000 gram jars.
- 5, 10 and 30cc syringes
- 6 ounce, 12 ounce and ProFlow™ cartridges.

9. Safety

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

10. Storage

- All paste should be refrigerated and should not exceed 10°C **
- Avoid direct sunlight and exposure to temperatures exceeding 35°C.
- Allow paste to come to room temperature for a minimum of 2 hours prior to opening.
- Paste packaged in syringes and cartridges should be stored tip down.

** Solder paste packaged in jars may be stored at room temperature (20 - 25°C) if used within 2 months of shipment.

11. Warranty

- Material guaranteed to meet specifications for 9 months from date of manufacture.

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The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for a particular application.

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