

Technical Data Sheet

F 917 Series No-Clean Solder Paste

Anti-Tombstone solder paste with with excellent wetting

1. Description

The solder pastes of the F 917 Series are ready-to-use homogeneous mixtures with low odour characteristics, consisting of metal powder, binders, solvents, fluxes and thixotropic agents.

Key Benefits

- Excellent printing properties → prints through narrow stencil openings and is suitable for high-speed printing.
- Insensitive to humidity and temperature → no splashing,
- Outstanding wetting capability both in nitrogen at common SMT surfaces
- Very long stencil life → no quick thickening on the stencil up to 8 h
- Can be used in printers with a temperature control unit → no drying caused by ventilation
- Very high adhesion → suitable for machines with very high accelerations / decelerations
- Low slump characteristics → no tendency to bridge or to solder ball formation on chip resistor and capacitors
- The F 917 Series has been optimised to prevent tombstones
- Very high SIR – high reliability

2. Product indication

Indication:	F917Sn63-90S30
Alloy:	Sn63/Pb37/Sb

3. Physical properties:

Metal powder:

Particle size:	Type 3 = 25 –45 µm (325/+500 mesh)	
Shape:	Spherical	
Melting Point:	Sn63/Pb37/Sb	=183°C
Composition:	Sn63/Pb37/Sb	= F917Sn63-90S30
Density:	Sn63/Pb37/Sb	8,4 g/cc

Solder Paste:

Metal Content:	89,5 ± 0,5 %
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4. Performance Parameters

Stencil thickness:	< 200microns (\leq mil)
Minimum Pitch:	400 microns (16 mil), stencil thickness : 150 microns
Minimum width of stencil apertures:	200 microns (8 mil)
Print speed:	10 – 150 mm/s
Print after wait:	30 min (230 microns openings)

5. Reflow Parameters (recommendation)

- Reflow can be done under air or an inert atmosphere.
- Printed circuits can be stored also at high humidity, e.g. 6h at 25°C / 100% R.H.

6. Residue properties

Flux Activity:	DIN EN 29454-1	1.2.2.C
SIR:	85°C/85 r.H./100 V DC/500 h	Pass
	1,00E +09 Ohm	
Silver Chromate Test Paper: Acc-IPC J-STD004	Pass	

7. Recommended Processing Guidelines

- The flux residues don't need to be cleaned. They may remain on the circuit. If desired, the residues can be washed with diverse Zestron and Vigon cleaning materials.
- Ensure that the paste has reached room temperature before opening, to prevent condensation.
- Stir well prior to use.
- Print through a stencil
- The printed solder paste remains tacky up to allow device insertion. The exact time depends on the environmental conditions, components size and form, and on the accelerations/decelerations in the line.
- The peak temperature depends on the heat capacity of the components. Typical peak temperature >210°C.

8. Storage

- Store the solder paste in tightly-sealed jars / syringes and avoid exposure to sunlight and high humidity.
- In Jars:
 - Min. 6 month in a refrigerator at 2-10°C
- In cartridges and cassettes:
 - Min. 3 month in a refrigerator at 2-10°C
 - Store syringes vertically, tip down!

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