Solder Paste (Improved Continuous Printing & Wettability)

This paste allows you to switch over from N_2 reflow to normal O_2 reflow. For circuit boards and parts with bad wettability.

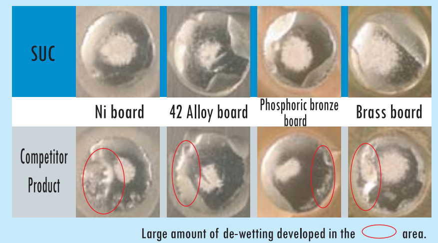
LFM-48 SUC

① **Can maintain stable print volume and print shape throughout continuous printing.**
② **Good wettability even with normal O_2 reflow. Forms stable fillets on all parts. Removes the need for N_2 reflow and therby contributes to CO_2 reduction, by decreasing energy consumed and overall running costs.**
③ **Good wettability even with Ni plated materials. Can remove BGA de-wetting and "head-in-pillow" type defects.**
④ **Ensures reliability with a no-clean flux. Can be freely used without washing with a wide range of products and fields.**

Product Name	Units	LFM-48U SUC	LFM-48W SUC
Alloy Name		LFM-48	←
Alloy Composition		Sn-3,0Ag-0,5Cu	←
Melting Temperature	(°C)	217-220	←
Type of Powder		U	W
Powder Size	(μm)	10-28	20-38
Flux Name		SUC	←
Flux Content	(%)	11,5	←
Viskosity	(Pa·s)	220±30	←
Thixotropic value		0,62±30	←

■ Wettability on various metals

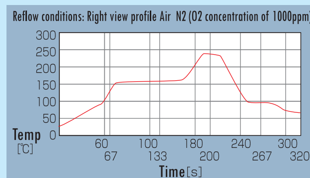
Goal: Confirm wettability on metals that don`t solder well.
Conditions: Target Metals 30 x 30 x 0,3mm
Nickel (Ni)
Ni, 42 Alloy (Fe-42Ni)
Phosphor bronze (Cu-Sn-P)
Brass (Cu-Zn)
Thick heating conditions: Heat up on a 240°C hot plate.
Printing amount: Ø 6,5mm, 200μm

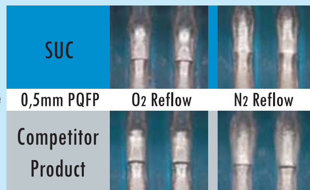


Large amount of de-wetting developed in the ◯ area.

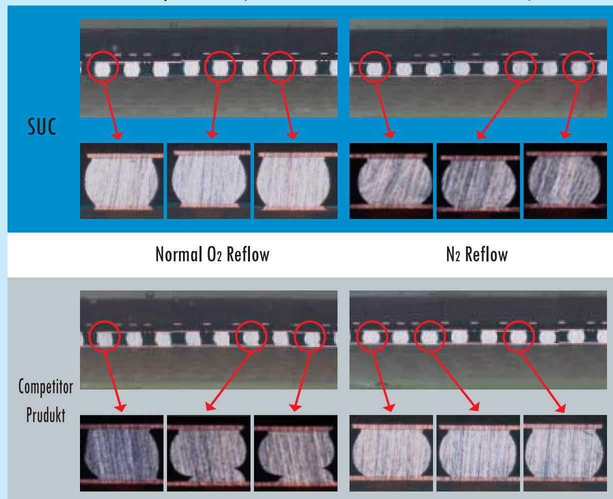
■ Comparison of wettabiliy on various parts

Goal: Confirm wetting force on QFP and BGA with both normal and N_2 reflow.
Conditions-Printer: Panasonic SP60P-M
Mask: SUS Laser Cut (120μm)
Squeegee: Metal squeegee
Printing conditions:
Printing pressure: 12 x 10^{-2}N
Printing speed: 30mm/sec.
Release speed uniform speed of 10mm/sec.
Clearance: -0,5mm
Evaluated circuit board: printing assessment use circuit board:
100 x 100 x 1,2mm
Prelax treated



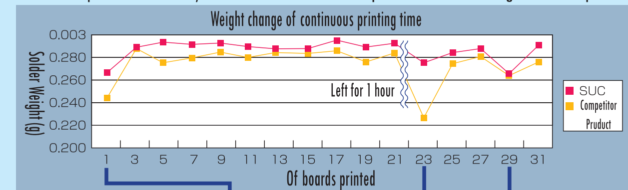


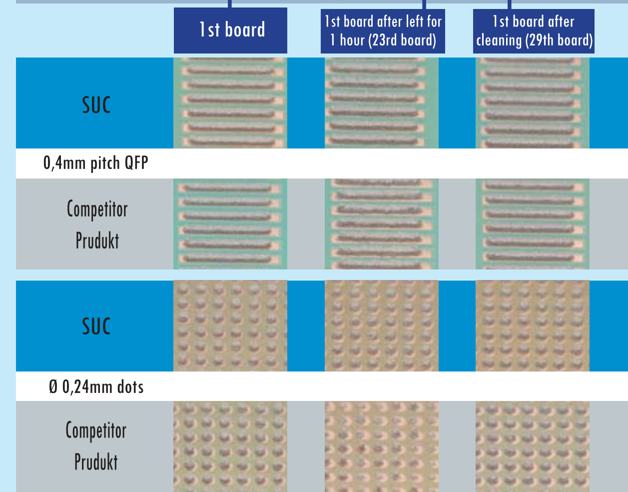
■ Oxidized 0,5mm pitch BGA (Stored at 85°C85RH% for 24 hours.)



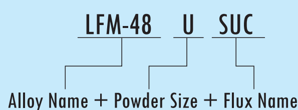
■ Continuous Printability Test

Goal: Confirm print volume during continued printing and recovery after abandon time of 1 hour.
Conditions-Printer: Panasonic SP60P-M
Mask: SUS Laser Cut (120μm)
Squeegee: Metal squeegee
Printing conditions:
Printing pressure: 12 x 10^{-2}N
Printing speed: 30mm/sec.
Release speed uniform speed of 10mm/sec.
Clearance: -0,5mm
Evaluated circuit board: printing assessment use circuit board: 100 x 100 x 1,6mm Prelax treated
Evaluated area: Ø 0,24mm Dots, 0,4mm pitch QFP
Boards printed:
22 boards printed continuously → left for 1 hour → 6 boards printed → full cleaning → 4 boards printed





Product name component for solder paste



Solder paste products specification

Flux Name	Alloy composition	Melting Temparature	Powder Size	Flux Content	Viscosity
SUC	LFM-48 (Sn-3,0Ag-0,5Cu)	217 - 220°C	W: 20-38μm	11,5%	220Pa·s
			U: 10-28μm		

* LFM-48 has been sublicensed for JP Pat.No. 3027441 and US Pat.No.5527628

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