

Date:

TO:

S P E C I F I C A T I O N

NAME : almit SRC Solder Paste

LFM-48W TM-HP(L)

Item No.	Kind
	LFM-48W TM-HP(L) Flux Content 12.0% Solder Powder Size: 20 – 38 (μ m)

NIHON ALMIT CO., LTD

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812-0011 Japan TEL: 092-483-0367 FAX: 092-483-0324

1. Name :

almit SRC Solder Paste LFM-48W TM-HP(L)

2. Scope :

This spec. is specified for almit solder paste LFM-48W TM-HP(L) delivered by Nihon Almit Co., Ltd. to Messrs. _____ .

3 Net weight & Allowances: (g)

Net weight	500
Allowance	-0, +10

4. Chemical Composition : (wt%)

Chemical element	Main constituents			Impurities				
	Sn	Ag	Cu	Pb	Sb	Bi	Au	In
Standard	Remainder	3.0 ± 0.2	0.5 ± 0.1	<0.05	≤ 0.10	≤ 0.05	≤ 0.05	≤ 0.10
Chemical element	Impurities							
	Al	As	Cd	Fe	Ni	Zn		
Standard	≤ 0.001	≤ 0.03	≤ 0.002	≤ 0.02	≤ 0.01	≤ 0.001		

5. Solder Powder Size & Distribution (J-STD-005 3.3.4.1)

% of Sample by Weight – Nominal Size

Type	None Larger Than	Less Than 1% Larger than	90% Minimum Between	10% Maximum Less Than
Type4	40 Microns	38 Microns	38-20 Microns	20 Microns

6. Quality characteristics:

Test items	Standard	Test Methods
Metal Percent (wt%)	88.0 ± 1.0	IPC-TM-650 2.2.20
Silver Chromate	Pass	IPC-TM-650 2.3.33
Copper Mirror Test	Pass	IPC-TM-650 2.3.32
SIR (85°C, 85%, 168 hr, measured out of chamber) (Ω)	$\geq 1 \times 10^8$	IPC-TM-650 2.6.3.3
Electrochemical Migration Resistance Test (85°C, 85%, 500 hr, measured out of chamber)	Pass	IPC-TM-650 2.6.14.1
Corrosion Test	Pass	IPC-TM-650 2.6.15
Flux materials composition	RO	J-STD-004 1.2
Quantitative Halide	L1<0.5%	IPC-TM-650 2.3.35
Fluorides By Spot Test	Pass	IPC-TM-650 2.6.35.1

7. Physical Properties:

Metal Name	Solidus (°C)	Liquidus (°C)	Specific Gravity
LFM-48	217	220	7.4

8. Lot Size :

A single lot is consisted of, and may vary between 10 - 100kg, depends upon the production plan.

9. Product inspection:

Inspection items are applied to each lot as follows:

Item No.	Inspection Item	Contents	Standard
1	Appearance	Color	Comparison with Limit Specimen
2	Weight	Net Weight	-0, +10 (g)
3	Solder Powder Size	20/38 (W)	$94 \leq$ (wt%)
4	Metal Composition	Sn	Balance (wt%)
		Ag	3.0 ± 0.2 (wt%)
		Cu	0.5 ± 0.1 (wt%)
5	Characteristics	Flux Content	12.0 ± 0.5 (wt%)
6		Solder Balling Test (*Almit Method)	Comparison with Limit specimen
7		Viscosity (Spiral type, 10rpm, 25°C) (IPC-650-2.4.34.3)	200 ± 30 (Pa·s) 200000 ± 30000 (cps)
8		Solderability on Cu Plate	Comparison with Limit Specimen
9		Dryness	Chalk powder should be easily removed from each test specimen.

*Straight lines of solder paste are printed on to a JIS-2 type substrate then reflowed. The reflowed solder is examined with a stereo microscope at 30X magnification. No more than 2 solder balls larger than one fifth the size of the pattern gap is allowed per gap.

10. Packing :

Individual Packaging		Outer Packaging	
Unit	Packaging	Unit	Packaging
500 g	Polyethylene bottle with inner lid plastic bag	10.0 kg 20.0 kg	Cardboard box

11. Identification :

	Polyethylene Bottle	Cardboard Box
Name	almit SRC Solder Paste LFM-48W TM-HP(L)	Same as the left
Lot No.	(Ex.) 060101-1	Ditto
Solder Powder Size	20-38 μ m	Ditto
Use before.	(Ex.) 06-06-30 (Indicate in the Christian era)	Ditto
Net weight	(Ex.) 500 g	Ditto
Company Name	NIHON ALMIT CO., LTD.	Ditto

12. Maker Address :

Nihon Almit Co., Ltd.

Almit Bldg., 2-14-2 Yayoicho, Nakano-ku, Tokyo, Japan

13. In case of changing this spec., it should be accepted by _____ .

«HOW TO HANDLE LFM-48W TM-HP(L)»

1. Storage:

- Hold in a refrigerator. (0-10°C)
- It is recommended to use within 6 months from manufacturing date.
- The solder paste should be used as quickly as possible once lid has been opened.
- Unused solder paste in the jar should be refrigerated after re-applying the inner and outer lids.

2. How to Use:

- Prior to usage, solder paste should be removed from refrigeration for over 2 hours until it reaches room temperature.
- We recommend to stir the solder paste by mixing machine before use it. When stir by a spatula, open the jar after the solder paste is warmed up to room temperature and stir slowly to make the paste homogeneous. Caution must be taken not to mix in air.
- After printing the solder paste, mount components immediately and let it pass through reflow furnace.
- Slowly heat the reflow furnace at 1.0 to 2.0°C/second till reaching 120°C. Set peak temperature at 170 to 190°C during pre-heating and 230 to 250°C during reflow.
- This solder paste corresponds to No-Clean process, however confirmation may be required whether No-Clean process is applicable under user's expectancy.
- White residue (insulator) may appear after cleaning.
- Solder paste must be wiped off from metal mask, squeegee and spatula by applying solvent such as alcohol immediately after use.

3. Caution:

- The solder paste is not edible.
- The solder paste is for the industrial use only.
- Avoid contact with eyes and skin.
- Avoid inhalation of gases emitted by solder paste during use.
- Provide proper ventilation.

4. Notice:

- If contact with skin, wiped off with like alcohol and wash with soap and water, immediately.
- Use rubber gloves and protective glasses, if necessary.

5. Delivery:

- Usually 2 weeks from acceptance of order.

Issue date Feb.15.2007

Approved	Confirm	Prepared
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