

**Trade Name: LFM-48X TM-HP 14%**
**1. Company Address**

Almit GmbH Tel.: +49 6061 96925-0  
 Unterer Hammer 3 Fax: +49 6061 96925-18  
 Deutschland  
 (D) 64720 Michelstadt -  
 bei Frankfurt

**2. Validity**

This specification is specified for:  
 Solder Paste Lead Free LFM-48X TM-HP  
 14%  
 Delivered by Almit GmbH to:

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**3. Diameter & Allowence**

Weight	40g	80g	100g	250g	20g
Allowance	-0, +5g				

**4. Deliverable Reel Size**

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

**5. Physical Properties**

Test	Characteristics	Test Methods
Metal Content	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%, 168hr) (Ω)	≥ 1 x 10 <sup>8</sup>	IPC-TM-650:2.6.3.3
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

**6. Characteristics**

Composition	Components							
	Sn	Ag	Cu	Pb	Sb	Bi	Al	As
Standard	Rest	3.0	0.5	<0.05	≤0.10	≤0.05	≤0.001	≤0.03
Composition	Components							
	Cd	Fe	Zn					
Standard	≤0.002	≤0.02	≤0.001					

**7. Solder Powder Size & Distribution**

Type	not larger than	less than 1% larger than	at least 80% between	at most 10% less than
Type 3(X)	50 Microns	45 Microns	25 - 45 Microns	20 Microns

## 8. Lot Size

A single lot contains 500kg which is the amount of one melting.

## 9. Quality and Inspection

Inspection items are applied to each lot as follows:

Test No.	Inspection Item	Contents	Standard
1	Appearance	Color	Comparison with Limit Specimen
2	Weight	Net-Weight	-0 ; +5 (g)
3	Solder Powder Size	25-45 $\mu\text{m}$	90 $\leq$ (wt%)
4	Metal Composition	Sn	Rest (wt%)
		Ag	3.0 $\pm$ 0.2 (wt%)
		Cu	0.5 $\pm$ 0.1 (wt%)
5	Characteristics	Flux Content	14.0 $\pm$ 0.5 (wt%)
		Solder Balling Test	Comparison with Limit Specimen
		Viscosity (Spiral type, 10rpm, 25°C) (IPC-650-2.4.34.3)	90000 $\pm$ 30000 90 $\pm$ 30 (cps) (Pa.s)
		Solderability on Cu-Plate	Comparison with Limit Specimen
		Dryness	Chalk powder should be easily removed from each test specimen.

\*Straight lines of solder paste are printed on 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 Package		Outer Package	
Unit	Packing	Unit	Packing
20g	5cc Cartridge		Cardboard box
40g	10cc Cartridge		
80g	30cc Cartridge		
100g	30cc Cartridge		
250g	100cc Cartridge		

## 11. Identification

	Polyethylene bottle	Cardboard
Name	LFM-48X TM-HP 14%	same as the left
Lot Nr.	(Ex) 120119-9	dto.
Solder Powder Size	(X)	dto.
Date of Mfg.	(Ex.) 19.01.2012	dto
Net-Weight	(Ex.) 500g	dto.
Maker	Nihon Almit Co. Ltd.	dto.

## 12. Maker Address

Nihon Almit Co. Ltd. - Productive  
Engineering Center  
8154-227, Uenohara, Kitatsuru-gun,  
Yamanashi, 409-0112 Japan

**13. In case of changing this specification it should be accepted by**

Signature \_\_\_\_\_ Date \_\_\_\_\_

**14.** This product is manufactured, using all guaranteed materials according to the legal law regulations  
Up to three (3) years from the manufactured date (lot number).

**15. Shelf Life**

1. Refrigerating is recommended at a temperature of 2-8°C to guarantee shelf life of 4 months
2. Paste can be stored at room temperature for 1 week up to 25°C prior to use (only applicable for jars)