



## SPECIFICATION

**NAME : ALMIT SRC Solder Paste  
Sn63 HM1-RMA V14L**

<b>Lot No.</b>	<b>Marketing Name</b>
	Sn63 HM1-RMA V14L Flux content 9.5% Solder Powder Size: 25-45µm (Type 3)

### **NIHON ALMIT Co. Ltd.**

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**1. Product Name:** Sn63 HM1-RMA V14L

**2. Scope:** This specification is specified for Almit solder paste Sn63 HM1-RMA V14L delivered by Nihon Almit Co, Ltd to Messrs. \_\_\_\_\_

**3. Weight and Tolerances: (kg)**

<b>Weight</b>	0.5	0.7	1
<b>Allowance</b>	+ 0.01, - 0	+0.01, - 0	+ 0.01, - 0

**4. Chemical Composition: ( wt. % ) ( QQ-S-571F )**

**Sn63 HM1-RMA V14L**

<b>Compo.</b>	<b>Sn</b>	<b>Pb</b>	<b>Ag</b>	<b>Sb</b>	<b>Cu</b>	<b>Bi</b>	<b>Zn</b>	<b>Fe</b>
Sn63	62.5/63.5	Bal	≤ 0.1	≤ 0.12	≤ 0.08	≤ 0.1	≤ 0.005	≤ 0.02

<b>Al</b>	<b>As</b>	<b>Cd</b>	<b>Au</b>	<b>In</b>	<b>Ni</b>	<b>P</b>	<b>Other</b>
≤ 0.005	≤ 0.03	≤ 0.005	≤ 0.08	≤ 0.1	≤ 0.01	≤ 0.01	≤ 0.005

**5. Solder Powder Size & Distribution:**

<b>Size ( μm )</b> 25/45	<b>Powder Size ( μm )</b>	+ 45	- 20
	<b>Distribution ( wt % )</b>	≤ 5.0	≤ 1.0

**6. Characteristics:**

<b>Items</b>	<b>Characteristics</b>	<b>Test Methods</b>
<b>Flux Content ( wt % )</b>	9.50 +/- 0.5	JIS-Z-3197
<b>Halides ( Chloride &amp; Bromide )</b>	Pass	QQ-S-571F
<b>Water Extract Resistance ( Ω/cm )</b>	≥ 100,000	QQ-S-571F
<b>Cu Mirror Test</b>	Pass	QQ-S-571F
<b>SIR ( Ω )</b>	≥ 1 x 10 <sup>12</sup>	JIS-Z-3197
<b>Spreadability on Cu Plate ( % )</b>	≥ 80	JIS-Z-3197
<b>Cu Plate Corrosion Test</b>	Pass	JIS-Z-3284
<b>Dryness</b>	Pass	JIS-Z-3197
<b>Flux Type</b>	L1	J-STD-0004

**7. Physical Properties:**

**Sn63 HM1-RMA V14L**

<b>Solidus Degs C</b>	<b>Liquidus Degs C</b>	<b>Specific Gravity</b>
183	183	8.4

## 8. Construction of one Lot:

Manufactured in lots varying between 10 kg and 100 kg

## 9. Quality & Inspection.

Inspection criteria are applied to each lot as follows :-

Item No.	Inspection Item		
1	Appearance	Colour	Comparison with Limit Specimen
2	Weight	Net Weight	-0, +0.01 (kg)
3	Solder Powder Size	25/45	90 (wt%)
4	Metal Composition	Sn	63.0±0.5 (wt%)
		Pb & Impurities	Rest
5	Characteristics	Flux Content	9.5±0.5 (wt%)
6		Solder Balling Test (*Almit Method)	Comparison with Limit specimen
7		Viscosity (Spiral type, 10rpm, 25°C)	150-300 (Pa.s)
8		Solderability on Cu Plate	Comparison with Limit Specimen
9		Dryness	Chalk powder should be easily removed from each test specimen.

**NB. \***

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

## 10. Packaging:

### Sn63 HM1-RMA V14L

Individual Packaging		Outer Packaging	
Unit	Packaging	Unit	Packaging
500 g	Polyethylene bottle with inner lid	10.0 kg	Cardboard Box
700 g	Polyethylene Cartridge	14.0 kg	Cardboard Box
1000 g	Polyethylene bottle with inner lid	20.0 kg	Cardboard Box

## 11. Identification:

### Sn63 HM1-RMA V14L

	<b>Polyethylene bottle</b>	<b>Cardboard box</b>
<b>Name</b>	Almit SRC Solder Paste Sn63 HM1-RMA V14L	Same as Polyethylene bottle
<b>Sn Content</b>	Indicate " Sn63 " in the product name	Ditto
<b>Lot No.</b>	( Example ) 970324-1	Ditto
<b>Solder Powder Size</b>	25 - 45 $\mu$ m	Ditto
<b>Date of Mfg.</b>	( Example ) 97 - 03 - 24 *	Ditto
<b>Validation Date</b>	( Example ) 09 - 23 **	Ditto
<b>Weight ( Nett )</b>	( Example ) 500 grms	Ditto
<b>Company Name</b>	Nihon Almit Co. Ltd.	Ditto

NB \* Date is shown as Year (97) Month (03) Day (24)

\*\* Date is shown as Month (06) Day (23) This date is usually 6 months after Mfg. Date.

## 12. Makers Address:

Nihon Almit Co. Ltd.

Almit Bldg. , 2-14-2 Yayoicho, Nakano-ku, Tokyo, 164, JAPAN.

## 13. Changes to this specification must be approved by:-

Signed \_\_\_\_\_ Date \_\_\_\_\_

# HANDLING PROCEDURES FOR ALMIT Sn63 HM1-RMA V14L SOLDER PASTE

## 1) STORAGE

Unopened containers should be kept in a refrigerator at 3 to 8 Degs C.

Solder Paste may be frozen at – 15 to – 20 Degs C.

After storage for over 6 months a Printing and Solderballing test should be carried out prior to production use.

Cream should be used as soon as possible after the container has been opened.

Keep the container **sealed as much as possible** to reduce contamination and oxidation.

## 2) USAGE

Before screening, the paste must be allowed to reach room temperature, this may take up to 8 hours dependant on volume. Opening COLD solder paste will cause moisture to condense and be absorbed by the Solder paste. This will cause Solder Balls.

After the paste has reached room temperature remove the lid and stir slowly for about 30 secs using a stainless steel spatula. Try to avoid trapping air in the cream as much as possible thus keeping oxidation to a minimum. Over mixing will reduce viscosity and lead to smearing. Air in the paste will cause Solder balls & increase the possibility of bridges.

After screening, components may be placed ( mounted ) immediately and passed straight into the reflow oven. See also Almit Solder Paste Reflow Parameters Data Sheet.

The Paste is designed for no clean assembly but post reflow residues may be cleaned if required by customer's specifications. Almit can advise on suitable cleaning processes.

At the end of the batch/shift any used paste **may** be discarded, however, to minimise wastage without any loss of performance **ALMIT** recommend that any paste remaining on the screen is carefully removed and stored in a clean airtight pot, ( a spare ALMIT pot is ideal ) mark the pot with the specification of the paste and store overnight in a refrigerator if required. During the next batch/shift this paste may be used to **supplement** the **fresh paste** added throughout the day, care being taken to ensure the specifications of both pastes are identical and that the paste has reached room temperature.

Any residual paste on the screen or squeegee should be removed using a recommended solvent or Alcohol.

## 3) ADDITIONAL INFORMATION

The Solder paste contains **LEAD**.

Ingestion, contact with eyes and skin must be avoided at all times using normal Health & Safety procedures. i.e.: Rubber gloves.

The Solder paste must only be used for industrial use under controlled conditions by trained operators. Avoid inhalation of any process gasses. To be used in a properly ventilated area.

## 4) HEALTH & SAFETY NOTICE

Any solder paste on the skin must be removed at once with Alcohol followed by washing with detergent and warm water. The use of Goggles and Gloves is strongly recommended.

Reference should also be made to the **ALMIT COSHH** documentation.

## 5) DELIVERY

The product is held in stock in the UK, hence delivery in the UK is usually within 3 working days of receipt of an order.