

ALPHA® RMA9086

No Clean Solder Paste

DESCRIPTION

ALPHA RMA9086 is a modified rosin, no-clean solder paste with a long stencil life and high activity for excellent solderability. It is for applications that require high process tolerance during printing and reflow due varying board types and conditions. **ALPHA RMA9086** is designed for stencil application in surface mounting processes where post reflow cleaning is not required.

ALPHA RMA9086 is ideal for standard and fine pitch printing through stencil apertures as small as 0.008 inches (0.2 mm). It is especially suitable for fine pitch applications. Crisp, well defined print definitions are repeatably attainable on 0.016 inch (0.4mm) pitch.

FEATURES & BENEFITS

- Excellent solder spread for allows for proper wetting on parts that can be difficult to solder
- Full bodied flux system with high activity allows for ease of reflow with most common profiles and on varying board types
- Long stencil life, results in less material changeout, usage and scrap due to long exposure times on the stencil or large numbers of part number changes
- Accurate depositions using quality Alpha Assembly Solutions manufactured stencils result in more prints before stencil wiping and less down time

PRODUCT INFORMATION

<u>Alloys:</u>	63Sn37Pb, 62Sn36Pb2Ag
<u>Powder Size:</u>	Type 3
<u>Packaging Sizes:</u>	500 gram jars
<u>Lead Free:</u>	Complies with RoHS Directive 2011/65/EU
<u>Halogen Content:</u>	Zero Halogen

ALPHA® RMA9086

No Clean Solder Paste

TECHNICAL DATA

CATEGORY	RESULTS	PROCEDURES/REMARKS
CHEMICAL PROPERTIES		
Ag Chromate Test	PASS	IPC J-STD-004
Copper Mirror Test	PASS; L-M	IPC J-STD-004
ELECTRICAL PROPERTIES		
IPC SIR (7 days, uncleaned)	PASS	IPC J-STD-004
Bellcore SIR (4 days, uncleaned)	PASS	Bellcore TR-NWT-000078
Bellcore Electromigration	PASS	Bellcore TR-NWT-000078
PHYSICAL PROPERTIES		
Reflowed Residue	~4.9% ww, tack free after reflow	
Stencil Life	>8 hours	
Tack Force	PASS ; > 2.0 g/mmE2 @ 6 hours, 50% RH (refer to Fig. 2)	IPC J-STD-005
Slump	Suitable for fine pitch printing	IPC-TM-650

ALPHA® RMA9086

No Clean Solder Paste

PROCESSING GUIDELINES

STORAGE & HANDLING	PRINTING	REFLOW	CLEANING
1. Refrigerate to guarantee stability @ 0-10°C (32-50°F). When stored in these conditions, shelf life of paste is 6 months. 2. Paste can be stored for 4 days at room temperature up to 25°C (77°F) prior to use. 3. When refrigerated, warm up paste container to room temperature for up to 4 hrs. Paste must be 19°C (66°F) before processing. Verify paste temperature with a thermometer to ensure paste is at 19°C (66°F) or greater before set up of printer. 4. Do not remove worked paste from stencil and mix with unused paste in jar. This will alter the rheology of unused paste. 5. These are starting recommendations and all process settings should be reviewed independently.	STENCIL: Recommend Alpha Assembly Solution's laser cut stencils @ 0.006 inch thick for 0.020 mil pitch (.008 inch thick for 0.025 inch pitch) or Alpha Assembly Solutions manufactured chemically etched stencil. Stencil design is subject to many process variables. Contact your local Alpha Assembly Solutions stencil site for advice. SQUEEGEE: Metal (recommended) or 90 durometer polyurethane. PRESSURE: 1 - 2.5 lb/in successfully tested at Alpha SPEED: 0.5 – 2.0 inch/s (20-200mm/s) tested at Alpha PASTE ROLL: 0.4 – 0.6 in (1.0-1.5 cm) diameter and make additions when roll reaches 0.2 inch (0.5cm) diameter (min). Max roll size will depend upon blade.	ATMOSPHERE: <u>Clean-dry air or nitrogen atmosphere.</u> PROFILE: The following settings have been determined to give optimal result but other settings may give excellent results as well. Ramp Up: 60°-120°C/min to 120°-160°C Dwell: 120°C-160°C 1-1.5 min Ramp @ 60°-120°C/min to Peak: 210°C-230°C TAL: >183°C – 0.5-1 min Ramp Down: 90°-120°C/min to room temperature. Ensure solder is frozen at exit of last heated zone to avoid disturbed joint defects.	Although designed as a no clean flux system, ALPHA RMA9086 residues can be effectively cleaned 10% ALPHA 2110 saponifier with DI water. Water washing will not turn residues cloudy. Misprints and stencil cleaning may be done with ALPHA SM-110 cleaners.

Figure 1: Reflow Profile Envelope

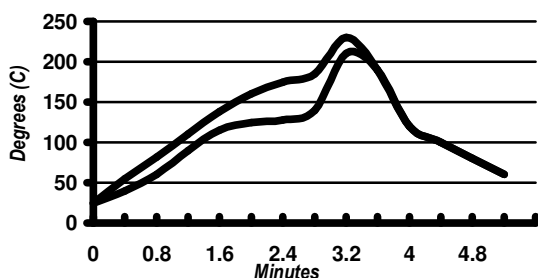
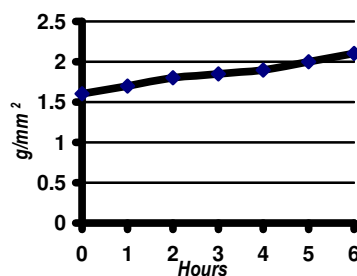


Figure 2: Tack vs. Time



ALPHA® RMA9086

No Clean Solder Paste

SAFETY

While the **ALPHA RMA9086** flux system is not considered toxic, its use in typical reflow will generate a small amount of reaction and decomposition vapors. These vapors should be adequately exhausted from the work area. Consult the SDS for all safety information, especially for toxicity data on alloys containing lead and silver. The most recent version is available at www.alphaassembly.com.

STORAGE

ALPHA RMA9086 is shipped in thermally controlled boxes and should be stored refrigerated upon receipt at 32°-50°F (9°-10°C). This will be sufficient to maintain a nominal shelf life of six months. **ALPHA RMA9086** should be permitted to reach room temperature before unsealing its package prior to use.

CONTACT INFORMATION

To confirm this is the most recent issue, please contact Alpha Assembly Solutions
AlphaAssembly.com

North America 300 Atrium Drive Somerset, NJ 08873, USA 800.367.5460	Europe Unit 2, Genesis Business Park Albert Drive Woking, Surrey, GU21 5RW, UK 01483.758400	Asia 8/F., Paul Y. Centre 51 Hung To Road Kwun Tong, Kowloon, Hong Kong 852.3190.3100
---	--	--

Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency directory assistance Chemtrec 1 - 800 - 424 - 9300.

DISCLAIMER: All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. No statement or recommendation shall constitute a representation unless set forth in an agreement signed by officers of seller and manufacturer. NO WARRANTY OR MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE. The following warranty is made in lieu of such warranties and all other warranties, express, implied, or statutory. Products are warranted to be free from defects in material and workmanship at the time sold. The sole obligation of seller and manufacturer under this warranty shall be to replace any product defective at the time sold. Under no circumstances shall manufacturer or seller be liable for any loss, damage or expense, direct or consequential, arising out of the inability to use the product. Notwithstanding the foregoing, if products are supplied in response to a customer request that specifies operating parameters beyond those stated above, or if products are used under conditions exceeding said parameters, the customer by acceptance or use thereof assumes all risk of product failure and of all direct, indirect and consequential damages that may result from use of the products under conditions, and agrees to exonerate, indemnify and hold harmless MacDermid Incorporated therefrom. No suggestion for product use nor anything contained herein shall be construed as a recommendation to use any product in infringement of any patent rights, and seller and manufacturer assume no responsibility or liability for any such infringement.

® Registered Trademark of MacDermid Performance Solutions. ™ Trademark of MacDermid Performance Solutions.
© Platform Specialty Products Corporation and its subsidiaries 2016.