PRODUCT DATA SHEET

RMA/RMA-F

Solder Paste

Features

- Exceptional printing
- Wide humidity tolerance
- Long stencil life
- Wide reflow profile window
- Outstanding slump resistance
- Excellent wetting compatibility

Packaging

Standard packaging for stencil printing applications includes 500g jars and 700g cartridges. For dispensing applications, 10 and 30cc syringes are standard. Other packaging options may be available upon request.

Storage and Handling Procedures

Refrigerated storage will prolong the shelf life of solder paste. The shelf life of **RMA/RMA-F** is 6 months when stored at -20–5°C. Storage temperatures should not exceed 25°C. When storing solder paste contained in syringes and cartridges, the packages should be stored with tip down.

Solder paste should be allowed to reach ambient working temperature prior to use. Generally, paste should be removed from refrigeration at least 2 hours before use. Actual time to reach thermal equilibrium will vary with container size. Paste temperature should be verified before use. Jars and cartridges should be labeled with date and time of opening.

Bellcore and J-STD Tests and Results

Test	Result	Test	Result
J-STD-004 (IPC-TM-650)		**J-STD-005 (IPC-TM-650)**	
Flux Type Classification	ROL1	Typical Tackiness	32g
Copper Mirror	Pass	Solder Ball Test	Pass
Silver Chromate	Pass	Wetting Test	Pass
SIR	Pass	Slump Test	Pass
Bellcore Electromigration	Pass	Post-Reflow Residue	40%

All information is for reference only.
Not to be used as incoming product specifications.

Wetting

RMA/RMA-F exhibits excellent wetting on a wide variety of surface finishes, such as immersion tin, immersion silver, nickel/gold, palladium, HASL, and OSP, under both air and nitrogen reflow atmosphere. The solder joints are shiny and smooth, even for ultrafine-pitch.

Technical Support

Indium Corporation's internationally experienced engineers provide in-depth technical assistance to our customers. Thoroughly knowledgeable in all facets of Material Science as it applies to the electronics and semiconductor sectors, Technical Support Engineers provide expert advice in solder preforms, wire, ribbon, and paste. Indium Corporation's Technical Support Engineers provide rapid response to all technical inquiries.

Safety Data Sheets

The SDS for this product can be found online at http://www.indium.com/sds

From One Engineer To Another®

INDIUM® CORPORATION®

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Printing

Printer Operation:

The following are general recommendations for stencil printer optimization for **RMA/RMA-F**. Adjustments may be necessary based on specific process requirements:

Solder Paste Bead Size	0.75–1 inch diameter 20–25mm diameter
Print Speed	1–3 inches/second 25–125mm/second
Squeegee Pressure	0.5–1.5lbs/inch of blade length 0.2–0.7kg/inch of blade length
Underside Stencil Wipe	Once every 10–25 prints or as necessary
Solder Paste Stencil Life	>6 hours at 20 to at least 70% RH and 22–28°C

Heating Stage:

A linear ramp rate of approximately 1°C/second allows gradual evaporation of volatile flux constituents and prevents defects such as solder balling/beading and bridging as a result of hot slump. It also prevents unnecessary depletion of fluxing capacity when using higher temperature alloys.

Liquidus Stage:

A peak temperature of 25–45°C above the melting point of the solder alloy is needed to form a quality solder joint and achieve acceptable wetting due to the formation of an intermetallic layer. If the peak temperature is excessive, or the time above liquidus greater than the recommended 45–90 seconds, flux charring, excessive intermetallic formation, and damage to the board and components can occur.

Cooling Stage:

A rapid cool down of <4°C/second is desired to form a fine-grain structure. Slow cooling will form a large-grain structure, which typically exhibits poor fatigue resistance. If excessive cooling of >4°C/second is used, both the components and the solder joint can be stressed due to a high CTE mismatch.

In the event of significant uneven thermal mass distribution, a profile with up to 3 minutes soaking at 10–20°C below the melting point may be used to reduce the temperature gradient and to minimize any possible tombstoning. Adjustments in time and temperature to these profiles may be necessary based on specific process requirements and the use of alloys with different melting temperatures.

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