

ALPHA[®] RMA390 DH4LV Solder Paste

Rosin Based, Halide-Free Flux

DESCRIPTION

ALPHA RMA390 DH4LV is a rosin based halide free, ROL0 paste flux designed for a broad range of applications and alloys. This is an ideal paste flux for reworking tin/lead or lead free BGA components.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

APPLICATION GUIDELINES

The flux may be applied by screen printing or pin transfer (substrate) or doctor blade / dip coating.

TECHNICAL DATA

Category	Results
Appearance	Smooth and tacky amber paste
Viscosity (Malcom)	120 to 400 poise, 5 rpm @ 25 °C
Fineness of Grind	< 10 micrometer
Acid Number (mg KOH/g)	92 to 99
Halide Content	Halide free
J-STD-004A SIR (pass > 10 ⁸)	Pass
Bellcore SIR (pass > 10 ¹¹)	Pass

REFLOW PROFILES

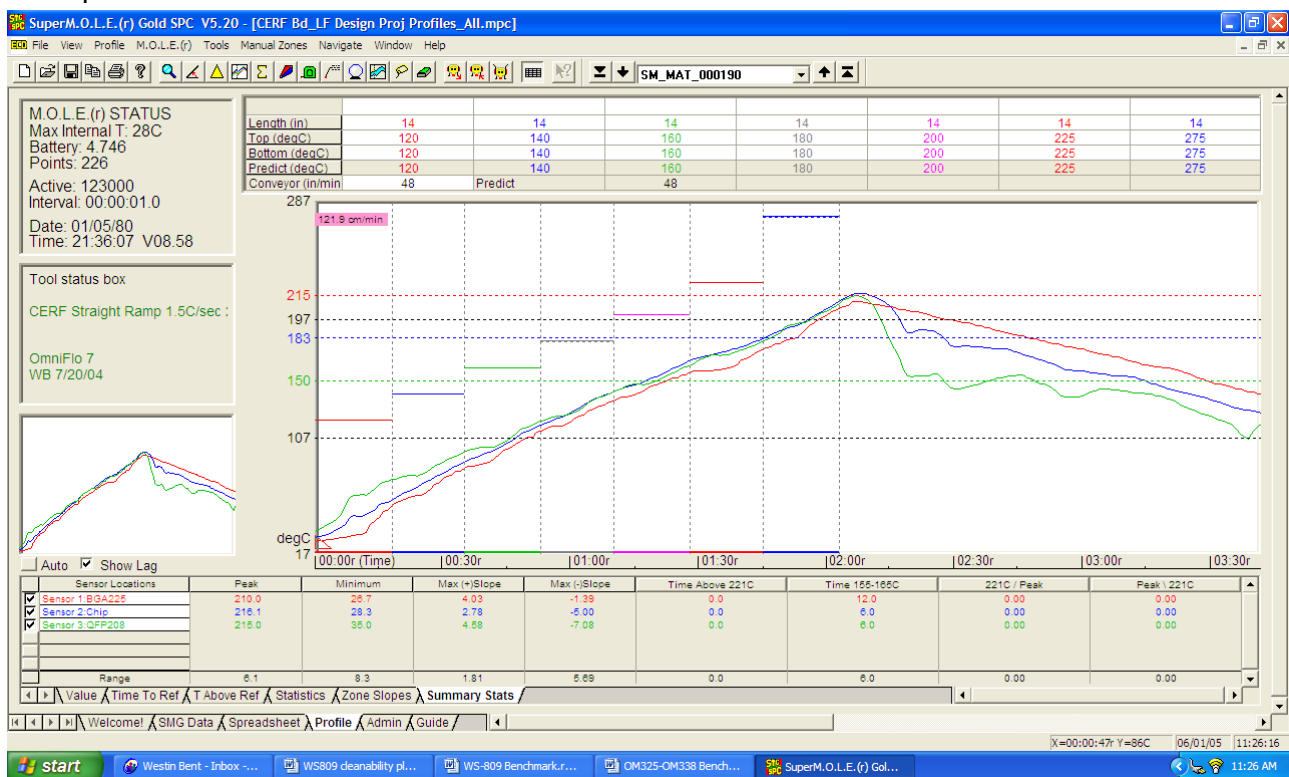
Reflow can be accomplished in dry air or nitrogen controlled atmosphere. The initial ramp rate should be 1 to 3 °C per second. If necessary, a dwell of 1 to 2 minutes at 120 to 160 °C is acceptable. Following this equilibrating period is a ramp of 0.5 to 1 °C per second to a peak temperature of 220 to 240 °C peak depending upon alloy. Examples of acceptable reflow profiles are diagramed below.

PROCESSING GUIDELINES

ALPHA RMA390 DH4LV can be safely left on the circuit board after reflow without cleaning. If cleaning is desired, most commercial electronic assembly cleaning solvent are effective including ALPHA 565, ALPHA Bioact EC-7, or ALPHA EC-7R. Bioact is a semi-aqueous cleaner designed to meet the most demanding cleaning requirements with complete environmental compatibility. Flux residue can also be removed by saponification with ALPHA 2110 in water.

REFLOW PROFILE

Examples of Reflow Profiles Used:



Straight Ramp Sn63 profile

RECYCLING SERVICES

We provide safe and efficient recycling services to help companies meet their environmental and legislative requirements and at the same time, maximize the value of their waste streams.

Our service collects solder dross, solder scrap, and various forms of solder paste waste. Please contact your local sales representative for recycling capabilities in your area or [link here](#).



SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available at MacdermidAlpha.com/assembly-solutions/knowledge-base.**

STORAGE

ALPHA RMA390 DH4LV flux should be stored in sealed containers and need not be refrigerated. Shelf life of unopened containers is nominally 12 months. If the material has been chilled, the container should be allowed to reach room temperature before opening to prevent moisture condensation from ambient air onto the flux.

CONTACT INFORMATION

To confirm this document is the most recent version, please contact Assembly@MacDermidAlpha.com

www.macdermidalpha.com

<p>North America 109 Corporate Blvd. South Plainfield, NJ 07080, USA 1.800.367.5460</p>	<p>Europe Unit 2, Genesis Business Park Albert Drive Woking, Surrey, GU21 5RW, UK 44.01483.758400</p>	<p>Asia 8/F., Paul Y. Centre 51 Hung To Road Kwun Tong, Kowloon, Hong Kong 852.3190.3100</p>
--	--	---

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 safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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 OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY 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 noncompliant product at the time sold. Under no circumstances shall manufacturer or seller be liable for any loss, damage or expense, direct, indirect, incidental 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, incidental and consequential damages that may result from use of the products under such conditions, and agrees to exonerate, indemnify, defend and hold harmless MacDermid, Incorporated and its affiliates therefrom. No suggestion for product use nor anything contained herein shall be construed as a recommendation to use any product in a manner that infringes any patent or other intellectual property rights, and seller and manufacturer assume no responsibility or liability for any such infringement.

© 2019 MacDermid, Inc. and its group of companies. All rights reserved. "(R)" and "TM" are registered trademarks or trademarks of MacDermid, Inc. and its group of companies in the United States and/or other countries.