

ALPHA[®] WS609H SOLDER PASTE

DESCRIPTION

ALPHA WS609H is a neutral pH water washable solder paste designed for surface mount and other demanding electronic assembly applications where post reflow water cleaning is used. It is available in 63Sn/37Pb or 62/36/2Ag alloy. The activator system works on a variety of metal surfaces including the organic protective coated copper PCB.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

APPLICATION GUIDELINES

Placement

ALPHA WS609H is designed for stencil application. Working time on the stencil is 4 hours while tack time exceeds 6 hours.

ALPHA WS609H has been used very successfully in the following configuration:

Application Method:	Fine Pitch Stencil Printing down to 16 mil
Nominal Metal:	90%
IPC Particle Size:	Type 3 (-325+500 mesh)
Brookfield Viscosity:	1200 kcps at 5 rpm

Residue Removal

ALPHA WS609H is a designed for complete water washability of flux residue after reflow. Hot water at 60 °C without saponifier at spray pressure of 35 to 65 psi is sufficient to remove all residues.

TECHNICAL DATA

Category	Results
Flux Characterization	
SIR (Ω) 7 days 85oC/85% RH cleaned by water	>108 Ω
Flux Residue pH	6.5

PROCESSING GUIDELINES**Reflow**

Reflow of ALPHA WS609H can be achieved with a variety of equipment including Infrared, Vapor Phase, Conductive Belt, or Hot Air. Since substrates and components come to thermal equilibrium based on surface area and mass; the following describe equilibrium temperatures measured at board level:

Preheat:	Ambient to 120 °C for 1 to 2 minutes
Soak:	140°C to 160 °C for 1 to 2 minutes
Reflow:	Above liquids temperature for 45 sec and peak temperature of 210 °C to 220 °C

Total heating dwell time may be 4 to 7 minutes depending on thermal inertia and component thermal sensitivity.

Storage & Handling

High temperatures should be avoided in the handling of ALPHA WS609H. This product is shipped in a thermally controlled carton. It should not be left on a shipping dock or exposed to heat after receipt.

Refrigerated storage is required. Typically paste should be stored at 0 to 10 °C. Before use, paste should be allowed to come to room temperature before opening the container.

The production environment should 20 to 26 °C and 30 to 60% RH.

Clean up of paste in the work area or from stencils or screens is best achieved with hot water or isopropyl alcohol as emulsion material permits. Local environmental and disposal regulation should be observed.

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.**

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.