

# ALPHA<sup>®</sup> OM-325MS

## Lead-Free Solder Paste for Ultra-Fine Pitch Printing Application

### DESCRIPTION

**ALPHA OM-325MS** is a solder paste whose flux system has been designed for fine pitch, lead-free applications. It is a no-clean, RELO formulation designed to offer the SMT process stable viscosity and thixotropy with continuous printing. It has also been formulated to provide resistance to high temperature pre-heating, wettability on ultra-fine pitch pads and reduce the occurrence of solder balling defects.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### FEATURES & BENEFITS

- Stable viscosity enables a longer period of continuous printing and results to reduced wastage of solder paste
- Able to withstand high pre-heat temperature heating because of the heat-resistant resin in the formulation
- Excellent solder and flux cosmetics after reflow soldering
- Reduction in random solderballing levels, minimizing rework and increasing first time yield
- Improved printability and rolling performance

### PRODUCT INFORMATION

<u>Alloys:</u>	SAC305, SACX0307
<u>Powder Size:</u>	Type 4
<u>Packaging Sizes:</u>	500 gram jars, 6" & 12" cartridges
<u>Lead Free:</u>	RoHS Directive EU/2015/863; amending Annex II of 2011/65/EU

NOTE 1: For other alloys, powder size and packaging sizes, contact your local Alpha Sales Office.

**APPLICATION GUIDELINES**

ALPHA OM-325MS is formulated for fine-pitch stencil application. Printer and dispenser temperature should be at 23 to 25 °C and 40 to 60%RH.

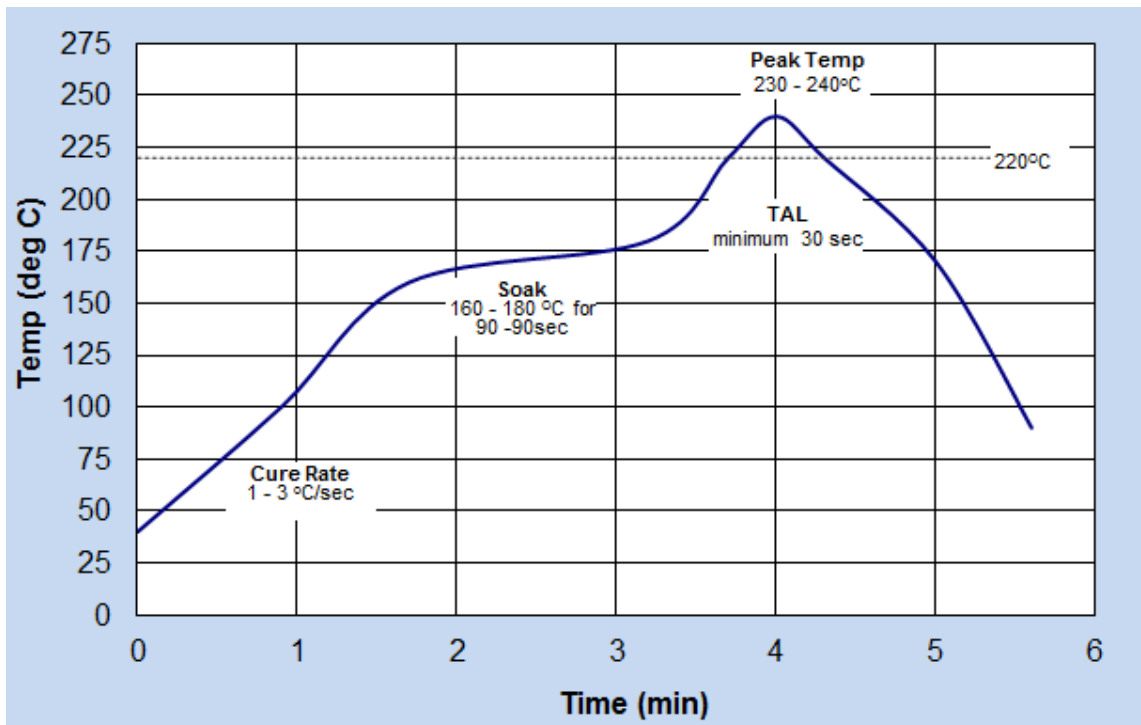
Cleaning is not necessary since the flux residues exhibit excellent corrosion resistance and have high insulation resistance without cleaning. If reflowed residue cleaning is required, ALPHA BC-3350 or ALPHA SM-110E is recommended.

**TECHNICAL DATA**

Category	Results	Procedures/Remarks
<b>Chemical Properties</b>		
Activity Level	RELO	IPC J-STD-004A
Ag Chromate Test	<b>Pass</b> , No color change	JIS Z 3197 8.1.4.2.3
Copper Mirror Test	<b>Pass</b> , No copper peeled	JIS Z 3197 8.4.2
Corrosion Test (Flux Residues)	<b>Pass</b> , No color change	JIS Z 3284 Appendix 4
<b>Electrical Properties</b>		
Surface Insulation Resistance Test	>1 x 10 <sup>9</sup> ohms	IPC J-STD-004
Surface Insulation Resistance Test	>1 x 10 <sup>10</sup> ohms	Belcore GR78-Core
JIS Electromigration (1000 hours @ 85 °C/85%RH 48V)	>1 x 10 <sup>9</sup> ohms	JIS Z 3284 Appendix 14
<b>PHYSICAL PROPERTIES</b> (Typical for Type 4 Powder)		
Color	Clear, Colorless Flux Residue	
Wetting / Dewetting	Copper Plate: Class 2	JIS Z 3284 Appendix 10
Tack Force Test	>100gf @24 hours	JIS Z 3284, Appendix 9
Viscosity	88.5% metal load at 1700 Poise viscosity target; 89% metal load at 1900 Poise viscosity target	Malcom Spiral Viscometer
Solder Ball	Flocculation Rate: 1	JIS Z 3284, Appendix 11
Hot Slump	No Contact	JIS Z 3284, Appendix 8

**REFLOW PROFILES**

**Figure 1: Typical Reflow Profile for SAC Alloy (in 5-Zone Hot-Air Oven)**



Note: These are profiles that were tested in the lab with acceptable reflow and coalescence performance, optimization to each board application should still be carried out by users to ensure best results.

**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](http://MacDermidAlpha.com/assembly-solutions/knowledge-base).**

**STORAGE**

ALPHA OM-325MS should be stored in a refrigerator upon receipt at 0 to 10 °C (32 to 50 °F). When stored under these conditions, the shelf life of ALPHA OM-325MS is 6 months from the manufacturing date.

ALPHA OM-325MS should be permitted to reach room temperature before unsealing its package prior to use. This will prevent moisture condensation build up in the solder paste. Warm-up paste container to room temperature for up to 4 hours. 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. Paste can be manually stirred before use. Do not remove worked paste from stencil and mix with unused paste in jar. This will alter the rheology of unused paste. Refer to the General Solder Paste Handling Guidelines for further information.

**CONTACT INFORMATION**

**To confirm this document is the most recent version, please contact [Assembly@MacDermidAlpha.com](mailto:Assembly@MacDermidAlpha.com)**

[www.macdermidalpha.com](http://www.macdermidalpha.com)

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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

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