

ALPHA[®] OL-107F

Lead-Free Solder Paste for Fine Pitch Printing Application

DESCRIPTION

ALPHA OL-107F is a solder paste whose flux system meets the requirements of fine pitch printing application. Wetting performance of the product has also been improved by using a unique activator system.

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
- Applicable to paste-in-hole process
- 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

Alloys: 96.5%Sn/3.5%Ag, SACX0307

Powder Size: Type 3, (25-45µm per IPC J-STD-005) and
Type 4 (20-38µm per IPC J-STD-005)

Packaging Sizes: 500 gram jars, 6" & 12" cartridges

Lead Free: 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 OL-107F is formulated for fine pitch stencil application. Printer and dispenser temperature should be at 23 to 25 °C and 40 to 60% RH.

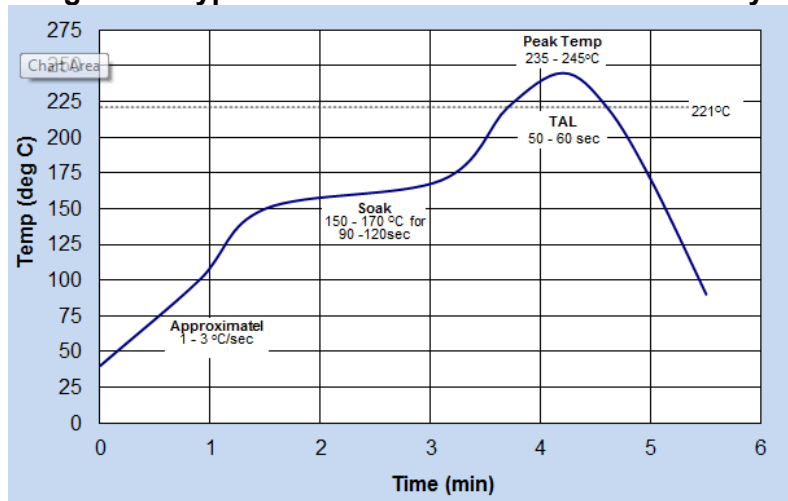
Cleaning is not necessary since the flux residues exhibit excellent corrosion resistance and have high insulation resistance without cleaning. If reflowed residue cleaning is required, ALPHA BC-3350 is recommended.

TECHNICAL DATA

Category	Results	Procedures/Remarks
Chemical Properties		
Activity Level	ROL1	IPC J-STD-004A
Ag Chromate Test	Pass , No color change	JIS-Z-3197 8.1.4.2.3
Copper Mirror Test	Pass , No copper peeled	JIS-Z-3197 8.4.2
Corrosion Test (Flux Residues)	Pass , No color change	JIS-Z-3284 Appendix 4
Electrical Properties		
JIS SIR	>1 x 10 ¹² ohms	JIS-Z-3284 Appendix 3a
JIS Electromigration (1000 hours @ 85 °C /85%RH 48V)	>1 x 10 ⁹ ohms	JIS-Z-3284 Appendix 14
Physical Properties (Typical using 88 to 90% Metal, 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	89% metal load for T3/T4:1900 – 2000 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 SACX0307 Alloy



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.**

STORAGE

ALPHA OL-107F 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 OL-107F is 6 months from the manufacturing date.

ALPHA OL-107F 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 setup 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

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>
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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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