

ALPHA[®] OL233HF

No-Clean, Lead-Free, Zero-Halogen Solder Paste

DESCRIPTION

ALPHA OL233HF is a lead-free, zero-halogen no-clean solder paste suitable for applications where high electrical reliability is required.

ALPHA OL233HF is designed to meet requirements specified by Telcordia, to enable consistent fine-pitch printing for 0603(mm) components and to reduce random solder ball and/or mid-chip solder ball (MCSB).

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES AND BENEFITS

- Long Stencil Life: Consistent performance for at least 8 hours of continuous printing
- Long, High Tack Force Life: Achieves 100gf for more than 24 hours at 23 to 25 °C / 40 to 60%RH
- Excellent Wetting Performance: De-wetting less for large area up to dia. 6.5 mm
- Reduced Solder Balls: Reduction of random balls and MCSB minimizes rework and increases first time yield
- Halogen Content: Zero-halogen; no halogen intentionally added
- Safe and Environmentally Friendly: Materials comply with RoHS and halogen-free requirements

PRODUCT INFORMATION

<u>Alloy:</u>	SAC305
<u>Powder Size:</u>	Type-4
<u>Packaging Sizes:</u>	500 gram jars
<u>Lead Free:</u>	Complies with RoHS Directive 2011/65/EC

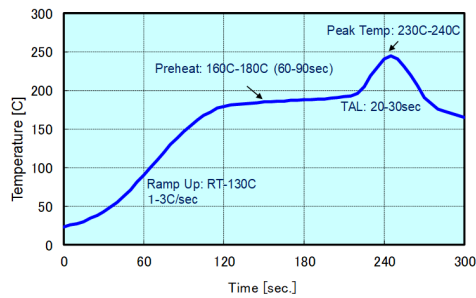
HALOGEN STATUS

Halogen Standards			
Standard	Requirement	Test Method	Status
JEITA ET-7304 Definition of Halogen Free Soldering Materials	< 1,000 ppm Br, Cl, F in solder material solids	TM EN 14582	Pass
IEC 612249-2-21	Post Soldering Residues contain < 900 ppm each or total of < 1,500 ppm Br or Cl from flame retardant source		Pass
JEDEC A Guideline for Defining "Low Halogen" Electronics	Post soldering residues contain < 1,000 ppm Br or Cl from flame retardant source		Pass

TECHNICAL DATA

Category	Results	Procedure/Remarks
Chemical Properties		
Activity Level	ROL0	IPC J-STD-004B
Ag Chromate Test	Pass	GR-78-CORE
Copper Mirror Test	Pass	JIS Z 3197
	Pass	GR-78-CORE
Copper Corrosion Test	Pass	JIS Z 3284
Electrical Properties		
Water Extract Resistivity	> 14,000 ohm cm	JIS Z 3197
SIR	> 1 x 10 ¹⁰ ohm (40C/90%RH/168 hours)	JIS Z 3284
	> 2 x 10 ¹⁰ ohm (35C/85%RH/96 hours)	GR-78-CORE
Electromigration	> 1 x 10 ⁹ ohm (85C/85%RH/1008 hours)	JIS Z 3284
	No remarkable corrosion. Resistivity greater than 1/10 of initial value No dendrites that reduce the space by more than 20%	GR-78-CORE

REFLOW PROFILES



Parameter	Guidelines
Atmosphere	Air or N ₂
Ramp Up (RT-130 °C)	1 to 3 °C / sec
Pre-heat	160 to 180 °C (60 to 90 sec)
TAL	20 to 30 sec
Peak Temp	230 to 240 °C

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

Refrigerate to guarantee stability @ 0 to 10 °C (32 to 50 °F). When stored under these conditions, the shelf life of ALPHA OL233HF is 6 months.

CONTACT INFORMATION

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

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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