

ALPHA[®] OM-340

Lead-Free Capable, No-Clean Paste Flux

DESCRIPTION

ALPHA OM-340 is a no-clean paste flux formulated for use in conjunction with ALPHA OM-340 solder paste. The semi-soft, residues provide a very low incidence of first probe false readings.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES AND BENEFITS

- Lead-Free Capable
- Completely compatible with ALPHA OM-340 Solder Paste residues
- Penetrable post reflow flux residues to maximize pin-testability

PRODUCT INFORMATION

Packaging Sizes: 30cc syringe, 100 gram jar

APPLICATION GUIDELINES

ALPHA OM-340 Paste Flux is especially suitable for printing on assemblies that will receive in-circuit test probing. It is suitable for use across a wide variety of lead free process settings.

ALPHA OM-340 Paste Flux may be applied by screen printing or pin transfer (substrate) or doctor blade / dip coating (package). It can also be dispensed.

A straight ramp profile at 0.8 to 1.2 °C per second ramp rate is recommended in clean, dry air or Nitrogen atmosphere. High density assemblies may require preheating within the profile and may be accomplished as follows:

- Ramp @ 60 to 120 °C/min to 145 to 160 °C
- Dwell @ 145 to 160 °C for 0.5 to 2.0 minutes
- Ramp @ 1 to 2 °C/sec to 230 to 245 °C peak temperature
- Time above 221 °C, 45 to 70 seconds
- Ramp down to R. T. @ 1.5 to 2.0 °C/sec.

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.

HALOGEN STATUS

Halogen Standards			
Standard	Requirement	Test Method	Status
JEITA ET-7304 Definition of Halogen Free Soldering Materials	< 1000 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 < 1500 ppm Br or Cl from flame retardant source		Pass
JEDEC A Guideline for Defining "Low Halogen" Electronics	Post soldering residues contain < 1000 ppm Br or Cl from flame retardant source		Pass
Zero Halogen: No halogenated compounds have been intentionally added to this product			

TECHNICAL DATA

Category	Results	Procedure/Remarks
Chemical Properties		
Activity Level	ROLO	IPC J-STD-004
Halide Content	Halide free (by titration)	IPC J-STD-004
Halogen Test	Pass, ND	EN14582, by oxygen bomb combustion, Non detectable (ND) at < 50 ppm
Ag Chromate Test	Pass	IPC J-STD-004
Copper Mirror Test	Pass	IPC J-STD-004A
Copper Corrosion Test	Pass No Evidence of Corrosion	IPC J-STD-004A

Electrical Properties		
SIR (IPC 7 days @ 85 °C/85% RH)	Pass , 8.6×10^9 ohms	IPC J-STD-004 (Pass $\geq 1 \times 10^8$ ohms)
SIR (Bellcore 96 hours @ 35 °C/85%RH)	Pass , 2.1×10^{11} ohms	Bellcore GR78-CORE (Pass $\geq 1 \times 10^{11}$ ohms)
Electromigration (Bellcore 96 hours @ 65 °C/85%RH 10V 500 hours)	Pass , Initial = 3.9×10^8 ohms Final = 1.9×10^9 ohms	Bellcore GR78-CORE (Pass=final > initial/10)
Physical Properties		
Color	Smooth, Off-White to Pale Yellow Paste	
Viscosity (5rpm at 25 °C by Malcom Viscometer)	260 to 340 Poise	
Acid Number (mgKOH/g)	150.00 to 180.00	
Moisture Content	Typically, 0.7% max	
Fineness of Grind (μm)	<10 μm (typical)	

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

The flux should be stored in sealed containers and need not be refrigerated. Shelf life of unopened containers at room temperature (19 to 25 °C / 66 to 77 °F) is 6 months from the manufacturing date. If the material has been chilled, the container should be allowed to reach room temperature before opening in order 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

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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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