

ALPHA® NC2000

No-Clean, Low Residue Flux

DESCRIPTION

ALPHA NC2000 is a low solids, no-clean flux for wave soldering through-hole, mixed technology and surface mount assemblies. It has a unique formulation that provides high activity with virtually no visible residue and an extremely low level of solder balls with most solder masks. **ALPHA NC2000** leaves a tack-free surface with high surface insulation resistance.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

- Low Solids No-Clean Formulation; Eliminates the Need for Cleaning
- Unique Activator System providing Extremely Low Levels of Solderballing and Solder Bridging
- No Visible Residue for Accurate Pin Testing and Enhanced Board Cosmetics

APPLICATION GUIDELINES

ALPHA NC2000 Flux utilizes a unique blend of organic activators which significantly reduces solder bridging, icicling and solder balling on difficult to solder assemblies. ALPHA NC2000 Flux can be applied by foam, spray or wave techniques. Topside preheat temperatures of 80 to 100 °C (180 to 210 °F) are recommended. Higher preheat temperatures can lead to premature volatilization of the activators, leading to less than optimal soldering performance. Best results are obtained using the following guidelines:

1. Maintain spray volume of the flux on each board.
2. Replace the flux daily unless a sealed, self-contained system is available.
3. Adjust the acid number as determined with the Alpha flux Solids Control Kit #3 to between 14.0 and 16.0 mg KOH/g with ALPHA 425 Thinner.
4. Add fresh ALPHA NC2000 to maintain the appropriate flux level.
5. Regularly clean the fluxing equipment. Equipment can be easily cleaned with sponge and water. For foam fluxers, the stone should be cleaned with ALPHA NC-T Thinner.
6. ALPHA NC2000 Flux can be maintained by monitoring specific gravity, but control by acid number determination is recommended.

TECHNICAL DATA

Item	Typical Values	Item	Typical Values
Appearance	Clear, Colorless to Pale Yellow Liquid	Flash Point (T.C.C.)	12 °C
Solids Content, %wt/wt	1.8	Recommended Thinner	ALPHA 425
Specific Gravity @ 25 °C (77 °F)	0.795 ± 0.003	Shelf Life (from Date of Mfg.)	360 Days
Acid Number (mg KOH/g)	15.0 ± 1.0	IPC J-STD-004 Designation	ORL0
Packaging Size	1, 5 & 55 Gallons		

CORROSION & ELECTRICAL TESTING
Corrosion Test

Test	Requirement	Results
Silver Chromate Paper Test (IPC / Bellcore Method)	No Detection of Halide	PASS
Copper Mirror Test (IPC / Bellcore Method)	No Complete Removal of Copper	PASS
Copper Corrosion Test (IPC)	No Evidence of Corrosion	PASS

J-STD-004 Surface Insulation Resistance (All values in ohms.)

Test	Conditions	Requirement	Results
"Comb-Down" Un-cleaned	85 °C / 85% RH, 7 Days	1.0 X 10 ⁸ min	6.2 X 10 ⁹ min
"Comb-Up" Un-cleaned	85 °C / 85% RH, 7 Days	1.0 X 10 ⁸ min	1.0 X 10 ¹⁰ min
Control	85 °C / 85% RH, 7 Days	2.0 X 10 ⁸ min	4.0 X 10 ¹⁰ min
IPC Test condition (per J-STD-004): -50V, measurements @ 100V / IPC B-24 board (0.4mm lines, 0.5mm spacing)			

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
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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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