

# ALPHA<sup>®</sup> 266-HF

## Halide-Free, Lead Tinning Flux

### DESCRIPTION

**ALPHA 2664-HF** is a highly active, halide-free water-based organic acid type flux especially designed to give effective solder wetting with Kovar, Alloy 42, and Nickel and is especially recommended for Copper and its alloys.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### FEATURES & BENEFITS

- Non-flammable: Fire hazards in wave soldering machines will be minimized
- Slow evaporation rate: Since deionized water is the primary solvent in this water-based flux, the specific gravity of such formulation will be more consistent over long periods of operation.
- Minimize bridging and provide even solder coating: Due to the sustained activity and excellent wetting properties, the flux is ideally suited for soldering of closely spaced component leads, such as PLCC or SOIC etc.
- Can be used as received or diluted depending on oxidation on lead surface: In general, a dilution of flux with water or alcohol at 1:1 or 2:1 ratio by volume can be applied, making this flux particularly cost-effective

### APPLICATION GUIDELINES

ALPHA 266-HF is free from chlorides or bromides and is recommended for automatic wave soldering applications where there is a concern about the presence of halide activator in the flux. This concern may arise from the possibility of either flux penetrating microcracks in component seals, or flux entrapment underneath, or in open or porous cavities of components, as all these conditions may cause detrimental effects to component reliability.

In addition, ALPHA 266-HF is specially designed to give high activity and excellent surface tension properties which minimize or eliminate soldering defects, such as icicling, bridging and excessive solder. ALPHA 266-HF can be used as a flux for tinning conventional IC or component leads. Moreover, the above special properties render the flux particularly suitable for lead tinning of flat packs, PLCCs and other SMDs.

**Flux Application:** ALPHA 266-HF can be applied by wave, dip, or spray techniques. Foam applications is not recommended. Besides, during wave soldering applications, preheating

temperature using water-based ALPHA 266-HF flux should be higher than that normally used for alcohol-based fluxes to avoid spattering. Alternatively, conveyor line speed might be lowered to drive out water in the flux. The recommended lead preheat temperature is  $100 \pm 5$  °C.

**Residue Removal:** Residues from ALPHA 266-HF are completely soluble in water and hence cleaning of these residues can be accomplished with hot water. For critical cleanliness requirements, final rinsing with deionized water may be required.

**Thinning:** No thinning is required since solvent evaporation from ALPHA 266-HF is minimal. However, ALPHA 425 Thinner, which is an alcohol mixture, or deionized water can be used to adjust the viscosity or activity level of ALPHA 266-HF Flux to suit a specific process. Generally, ALPHA 425 Thinner is recommended for dilution if there is problem of spattering.

**TECHNICAL DATA**

Item	Typical Values	Item	Typical Values
Appearance	Clear, pale yellow liquid	Pounds per gallon @ 25 °C (77 °F)	9.9
Specific Gravity @ 25 °C (77 °F)	$1.192 \pm 0.005$	Flash Point (T.C.C.)	NONE
Acid Number (mg KOH/g)	$254.2 \pm 20$	Recommended Thinner	ALPHA 425
pH @ 25 °C (77 °F), as is	$3.0 \pm 0.5$	Shelf Life (from Date of Mfg.)	540 days
Total Halides	10 ppm (max.)	IPC J-STD-004 Designation	ORH0
% Nonvolatile components, wt/wt	50.0	Packaging Size	1, 5 & 55 gallons

**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).**

**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)

<p><b>North America</b>          109 Corporate Blvd.          South Plainfield, NJ 07080, USA          1.800.367.5460</p>	<p><b>Europe</b>          Unit 2, Genesis Business Park          Albert Drive          Woking, Surrey, GU21 5RW, UK          44.01483.758400</p>	<p><b>Asia</b>          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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