

ALPHA® EF-8800HF & Kester® NF372-TB

Halogen-Free, High Reliability, Alcohol Based No-Clean Wave Soldering Fluxes

Wave Soldering Fluxes for Thick Board Applications in Lead-Free Processes

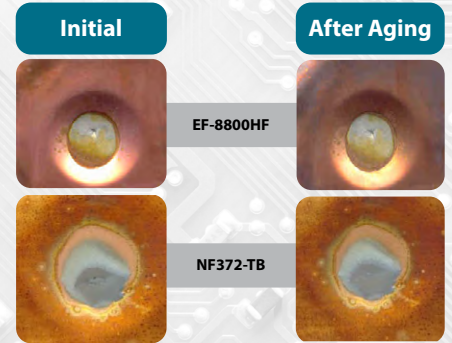
ALPHA EF-8800HF and Kester NF372-TB are alcohol-based fluxes designed for both standard and thicker, high-density PCBs in Lead-free processes. These fluxes show stable performance even under long exposure to higher preheat and higher solder pot temperatures.

Key Features

- **Unique activator/rosin package:** Produces highly reliable assemblies with excellent cosmetics and pin testability.
- **Thermally stable:** Excellent soldering in both single and dual wave processes, lead-free alloy capable.
- **Low surface tension:** High through hole penetration rate and uniform SMT pad coverage.
- **Tack free residue:** Excellent post-soldering cosmetics with pin testable residue.
- **Halogen Free:** Environmentally friendly.



COPPER CORROSION (IPC-TM-650 2.6.15) TEST



- Initial and after 10 days of exposure to 40 °C and 93% RH
- No evidence of greening or any change is observed
- These fluxes are classified "L" as per IPC JSTD-004B

COPPER MIRROR TEST (IPC-TM-650 2.3.32)



- No copper film was removed from the copper mirror
- "L" category corrosion per J-STD-004B

FLUX RESIDUE APPEARANCE



Clean and minimal flux residues on board

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TECHNICAL DATA	ALPHA EF-8800HF	Kester NF372-TB	PROCESS CONTROL	ALPHA EF-8800HF	Kester NF372-TB
Solids Content, wt/wt	6.0 %	3.9%	Flux Application	Spray	Spray
Acid Number (mg KOH/gm)	34.0	16.6	Amount of Flux Applied	150-465 µg/cm ² solids	93-217µg/cm ² solids
Specific Gravity @ 25 °C	0.799	0.793	Top-Side Preheat Temperature	90 to ~ 140 °C	
IPC J-STD-004(B) Designation	ORL0	ROL0	Bottom-Side Preheat Temperature	0 to +32 °C vs. Topside	
Halogen Free	YES	YES	Solder Pot	260 °C-270 °C for SnCu or SAC alloy 245 °C-260 °C for Sn63Pb37 alloy	
SIR, IPC J-STD-004(B)	PASSED	PASSED	Contact Time	3-10 seconds	3-7 seconds

ITEM	SPECIFICATION	ITEM	SPECIFICATION
IEC 61249-2-21	Post soldering residues contain <900ppm each or total of <1500ppm Br or Cl	TM EN 14582	PASS
JEDEC A Guideline for Defining "Low Halogen" Electronic products	Post soldering residues contain <1000ppm Br or Cl	Solids extraction per IPC-TM-650 2.3.34	PASS

HOLE FILL PERFORMANCE EXAMPLES

EF-8800HF

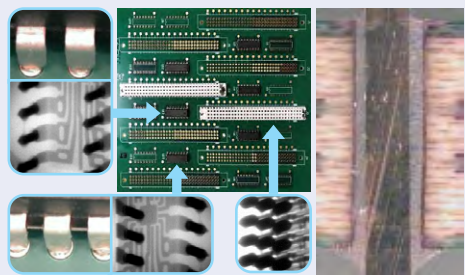
16 Cu Layer, OSP, 2.4mm Thick



Excellent hole-fill performance on complex server board, meets Class III hole-fill.

PROCESS PARAMETERS	TYPE/VALUE
Solder Pot Temp	270 °C
Alloy	SAC305
Topside Preheat Temp	122-135 °C
Contact Time	10.2 seconds

NF372-TB



PROCESS PARAMETERS	TYPE/VALUE
Solder Pot Temp	270 °C
Alloy	K100LD*
Topside Preheat Temp	113-135 °C
Contact Time	5 seconds

*Silver-free alloy, melting point 227°C, more challenge than SAC305

These are general guidelines which have proven to yield excellent results. However, depending upon your equipment, components, and circuit boards, your optimal settings may be different. In order to optimize your process, it is recommended to perform a design experiment, optimizing the most important variables (amount of flux applied, conveyor speed, topside preheat temperature, solder pot temperature and board orientation).



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