

ALPHA[®] RF-800S

No-Clean Flux

DESCRIPTION

ALPHA RF-800S is a low solids, no-clean flux formulation with a small percentage of rosin and non-halide activators. The unique rosin-activation system promotes excellent solder wetting to protected copper and solder coated surfaces. Post soldering residues of **ALPHA RF-800S** is minimal, slightly glossy and can be pin tested without removal.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

APPLICATION GUIDELINES

Flux Application: ALPHA RF-800S is designed to be applied with foam, wave, spray and mist fluxers. Flux deposition density and uniformity are critical to successful use of no-clean flux. Applying ALPHA RF-800S to a dry flux coating density of 500 to 1500 micrograms per square inch is recommended. Pre-heating the circuit assembly will partially dry the flux, enhance oxide removal and promote wicking as well as superior solder point formation. The degree of preheat is dependent on many variables; such as conveyor speed, type of components and substrates. Entering the solder wave with a top-side temperature of 85 to 115°C and a bottom-side temperature of 120 to 150°C is typical.

Control: The foam applicators should be supplied with compressed air, free of oil and water. Maintain flux fluid level sufficiently above the aerator stone to produce adequate foam height. Adjust air pressure to produce optimum height with foam consisting of uniform bubbles.

Flux applicator will require the addition of flux thinner to replace evaporative losses and maintain the balance in flux composition. Due to the very low solids content of ALPHA RF-800S, specific gravity is not an accurate measure for assessing the solids content. Monitoring and controlling the acid number is recommended for maintaining the flux composition. The acid number should be controlled between 17 and 19. Titration can be done with Alpha Flux control Kit #3. Request an Alpha technical bulletin for details on the kit and titration procedure.

In time, debris and contaminants will accumulate in the flux reservoir. For consistent soldering performance, replace flux periodically. After dumping used flux, the reservoir and applicator should be thoroughly cleaned with flux thinner. Refill reservoir with fresh flux and allow a few minutes to stabilize before resuming solder operation.

Start with clean boards and components. Maintain uniform flux coating. Separate boards to prevent flux carry over.

Residue Removal: If removal of flux residues is desired, it can be accomplished with ALPHA 2110 saponifier.

TECHNICAL DATA

Item	Typical Values	Item	Typical Values
Appearance	Clear, Pale Yellow Liquid	Flash Point (T.C.C.)	53.6 °F(12 °C)
Solids Content, %wt/wt	3.3%	Recommended Thinner	ALPHA 800 Additive
Specific Gravity @ 25 °C (77 °F)	0.794 ± 0.005	Shelf Life (from Date of Mfg.)	540 Days
Acid Number (mg KOH/g)	18 ± 1.5	IPC J-STD-004 Designation	ROL0
Pounds per Gallon	6.6	Packaging Size	1, 5 or 55 Gallons
% Chloride	None		

CORROSION & ELECTRICAL TESTING
Corrosion Test

Test		Result
IPC TM-650	Silver Chromate Paper	PASS
	Copper Mirror Test	PASS
	Copper Corrosion Test	PASS

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

Test	Requirements	Results
Un-cleaned	1.0 x 10 ⁸ minimum	2.94 x 10 ⁹
Cleaned	1.0 x 10 ⁸ minimum	5.88 x 10 ⁹

Bellcore Surface Insulation Resistance (All values in ohms)

Test	Results
Comb Up, Un-cleaned	3.2×10^{12}
Comb Up, Un-cleaned	3.1×10^{11}
Comb Up, Cleaned	1.7×10^{12}
Minimum Required	9.85×10^{10}
Test Condition: BELLCORE TR-TSY-000078, 25 mil lines and 50 mil spacing comb	

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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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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