

ALPHA[®] SM38-1X

No-Clean Surface Mount Flux

DESCRIPTION

ALPHA SM38-1X is a no-clean, halide-free and non-rosin based flux specifically designed for SMT assemblies. The **ALPHA SM38-1X** Flux has a low solids content and is free from corrosive halide activators while producing excellent wetting performance. The flux residues are non-corrosive and are safe to be left on the board.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

APPLICATION GUIDELINES

Preparation: In order to maintain consistent soldering performance and electrical reliability, it is important to begin the process with circuit boards and components that meet established requirements for solderability and ionic cleanliness. It is suggested that assemblers establish specifications on these items with their suppliers and that suppliers provide Certificates of Analysis with shipments and/or assemblers perform incoming inspection. A common specification for the ionic cleanliness of incoming boards and components is 5 μ g/in² maximum, as measured by an ionic contamination tester with heated solution.

Care should be taken in handling the circuit boards throughout the process. Boards should always be held at the edges. The use of clean, lint-free gloves is also recommended.

Conveyors, fingers and pallets should be cleaned. ALPHA SM-110 Solvent Cleaner has been found to be very useful for these cleaning applications.

Flux Application: ALPHA SM38-1X can be applied by foaming, brushing, dipping or spraying. When spray fluxing, the uniformity of the coating can be visually checked by running a piece of cardboard over the spray fluxer or by processing a board-sized piece of tempered glass through the spray and then through the preheat section.

Flux Solids Control: The solids content of ALPHA SM38-1X should be maintained by the addition of thinner to compensate for evaporation losses. Only ALPHA 425 Thinner should be used for this purpose, to ensure consistency of flux application and soldering characteristics.

Flux solids content should be monitored by periodic measurements of the specific gravity at 77 °F (25 °C). Flux thinner should be added to maintain the specific gravity between 0.791 and 0.801.

TECHNICAL DATA

Parameters	Typical Values	Parameters	Typical Values
Appearance	Clear, Colorless Liquid	Recommended Thinner	ALPHA 425
Specific Gravity @ 25 °C (77 °F)	0.796 ± 0.005	Shelf Life (from Date of Mfg.)	360 days
Acid Number (mg KOH/g)	11.9 ± 1.2	Packaging Size	5 gallons
Solids Content, % wt/wt	2.1	IPC J-STD-004 Designation	ORL0
Flash Point (T.C.C.)	12 °C		

CORROSION & ELECTRICAL TESTING

Test	Requirements for L0	Results
Silver Chromate Paper IPC-TM-650 2.3.33	No detection of halide	No color change; Pass
Copper Corrosion Test IPC-TM-650 2.6.15B	No evidence of corrosion	No evidence of corrosion
Surface Insulation Resistance IPC-TM-650 2.6.3.3	>1.0 x 10 ⁸ Ω	>1.0 x 10 ⁸ Ω

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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