

# ALPHA<sup>®</sup> 711 SERIES RA FLUXES

## Fully Activated Rosin Fluxes

### DESCRIPTION

**ALPHA 711 Series RA** wave solder fluxes are homogeneous solutions of pure-water-white rosin in organic solvents containing considerably strong activating agents than those in RMA Type fluxes. All RA fluxes contain a high quality grade of water-white gum rosin that meets the requirements of Class A of Type1, grade WW of Federal Specification LLL-R-626. The high degree of purity of the rosin used insures consistent flux performance.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### FEATURES & BENEFITS

Excellent Leaded and Lead -Free soldering performance on various board finishes.

- Evenly spread, tack free residue
- Capable for high density, as well as general purpose Lead-Free soldering processes
- Can be use in Pb-Free of Sn/Pb processes

These fluxes are suitable to solder a variety of substrates and material finishes such as beryllium copper, lead, brass, nickel plating, bronze, cadmium plating, solder plating, tin and copper. The high solids content of the ALPHA 711 Series fluxes insures adequate flux coverage and protection of boards during soldering, even at higher temperatures and extended times. ALPHA 711 Series fluxes are effectively used for solder coating or tinning bare leads of solderable metals.

### 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 5µg/in<sup>2</sup> maximum, as measured by an ionic contamination tester.

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 brand stencil cleaner is recommended for this process.

**Flux Application:** ALPHA 711 Series Fluxes can be applied by 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:** If rotary drum spray fluxing, the flux solids will need to be controlled via thinner addition. For measuring the solids content, Alpha's Flux Solids Control Kit #3, a digital titrator, is suggested. Request Alpha's Technical Bulletin SM-458 for details on the kit and titration procedure. When operating a rotary drum fluxer continuously, the acid number should be checked every eight hours. Over time, debris and contaminants will accumulate in recirculating type flux applicators. For consistent soldering performance, dispose of spent flux every 40 hours of operation. After emptying the flux, the reservoir should be thoroughly cleaned with IPA.

**Residue Removal** - ALPHA 711 Series Fluxes and the residues are designed to be left on the board. If desired, flux residues can be removed with ALPHA 2110 saponifier cleaner and with other commercially available solvent cleaners and saponifier cleaners. For high reliability applications, flux residues should be removed after soldering.

**TECHNICAL DATA**

Items	Typical Values			
	711	711-25	711-35B	711-35-MIL
Specific Gravity @ 25 °C (77 °F)	0.928 to 0.938	0.843 to 0.851	0.875	0.871 to 0.879
Solids Content, % wt/wt	57	25	35	35
Acid Number, mg KOH/gm	95 to 105	45.5 to 49.5		59.4 to 63.4
Shelf Life (from Date of Manufacturing)	1080 days	1080 days	1080 days	1080 days
Pound per Gallon @ 25 °C (77 °F)	7.76	7.05		
Flash Point (T.C.C.)	18 °C (64 °F)	18 °C (64 °F)	18 °C (64 °F)	12 °C (53.6 °F)
IPC J-STD-004 Designation	ROM1	ROM1	ROL1	ROM1

**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**

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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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