

ALPHA[®] 850 Series

Water Soluble Organic Flux

DESCRIPTION

ALPHA 850 Series of high activity fluxes was developed for complete water cleanability of their post-soldering residues – particularly the ionic residues which can cause electrical leakages and corrosion in critical electronic applications.

Conventionally, water-soluble fluxes contain significant amounts of water-soluble organic acids which, on exposure to soldering temperatures, degrade to residues which are less soluble in water. In small amounts these residues may not be visible, however, their presence can be readily demonstrated using the ALPHA Ionograph or by an insulation resistance test. **ALPHA 850 Series** was developed to minimize the amounts of ionic residues after cleaning without sacrificing the high fluxing activity usually associated with organic acid fluxes.

These fluxes exhibit a very low tendency for spattering in soldering and are therefore compatible with high soldering speeds. The residues after soldering remain fluid and fully water-soluble. They are easily and completely removed by agitated hot water.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

APPLICATION GUIDELINES

Flux Application: The ALPHA 850 Series of fluxes are recommended for automatic soldering applications where rosin fluxes are not sufficiently active and inorganic fluxes too corrosive. They have excellent characteristics for foam application and can also be applied by wave, spray, dip and brush techniques.

The ALPHA 850 Series of fluxes are supplied at three levels of solids content (non-volatile components). As with rosin type fluxes, the various levels of solids available in the ALPHA 850 Series enable the user to select the flux consistency characteristics ideally suited to each particular application.

ALPHA 850-41, with 41% solids, provides the highest level of fluxing activity and solids content for good solder coverage of multilayer boards.

ALPHA 850-33, with 33% solids, has the right balance of activity and medium solids content for good solder coverage of double-sided, plated-through-hole boards.

ALPHA 850-25, with 25% solids, enables good soldering of single-sided boards, leaving minimum flux residues to be removed during cleaning.

As with all water soluble types of fluxes, post-soldering cleaning is necessary. These fluxes should, therefore, be used only in those applications where hot water cleaning is feasible.

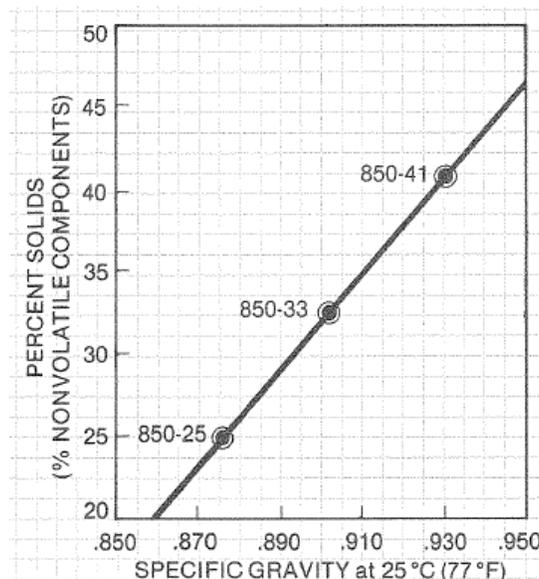
The ALPHA 850 Series is suitable for soldering to the following metals:

Brass	Bronze	Cadmium	Copper	Gold
Iron	Iron Alloys*	Lead	Nickel	Silicon Bronze
Silver	Solder (Plate)	Terne (Plate)	Tin / Nickel (Plate)	

* under favorable conditions only

Residue Removal: The ALPHA 850 Series residues should be cleaner as soon as possible after soldering. Since the residues remain liquid, they are easily dissolved in water. Dip tanks or automatic cleaning equipment such as in-line spray machines or dishwashers can be used without foaming problems caused by agitation or high-velocity sprays. For critical work, a final rinse in deionized water is desirable to remove the ions remaining from prior tap water rinses.

Thinning: The solids content of the ALPHA 850 Series should be maintained by the addition of thinner to compensate for evaporation losses. In general, it is recommended that the solids content not be allowed to increase by more than 5% before the addition of thinner. Thinner should be added in order to ensure consistency of flux foaming and soldering characteristics. Flux solids content is readily controlled by simple hydrometer measurement in conjunction with the graph shown below.



TECHNICAL DATA

Physical Properties	Typical Values		
	850-41	850-33	850-25
Appearance	Blue liquid	Blue liquid	Blue liquid
Specific Gravity @ 25 °C (77 °F)	0.930 ± 0.005	0.903 ± 0.005	0.876 ± 0.005
Solids Content, % wt/wt	41	33	25
Pounds per Gallon @ 25 °C (77 °F)	7.74	7.51	7.29
Shelf Life (from Date of Manufacturing)	540 days	540 days	540 days
Flash Point (T.C.C.)	17 °C (62 °F)	17 °C (62 °F)	17 °C (62 °F)
IPC J-STD-004 Designation	ORH1	ORH1	ORH1
Packaging Size	1, 5 and 55 gallon containers		

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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