ALPHA® SM35-10

Rosin Activated Flux

DESCRIPTION

ALPHA SM35-10 is a low ionic halide activated, pure rosin flux. It has been designed for defect free wave soldering of conventional printed through hole and surface mount technology assemblies.

ALPHA SM35-10 meets the low halide requirements of U.K. Ministry of Defense, Aircraft Material Specification D.T.D.599A. It also meets the Corrosion Test requirements of British Telecommunications Specification M459A and U.K. Specification BS 5625, class 5a.

The ionic chloride content of **ALPHA SM35-10** is less than 0.04% on a total flux basis, and less than 0.4% on a solids-only basis.

ALPHA SM35-10 meets the IPC-SF-818 standard requirements for classification as Flux Type LR2NC or MR3NC.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

- Fast Wetting
- Non-Corrosive Residues
- Medium Solids Content
- Cleaning Optional
- Conventional and Surface Mount Flux
- Defect Free Soldering
- High SIR Assemblies
- Pin Testing through Residues Possible
- Versatile, Easy to Use Flux

APPLICATION GUIDELINES

ALPHA SM35-10 should be applied by a conventional foam fluxer, however it is also possible to be sprayed. To achieve an even, fine-bubble foam, the liquid level in the flux tank should be maintained as high as possible. A foam generator with small pores should be used.

During use, most fluxes tend to thicken and become viscous because of solvent loss. For consistent results, it is recommended that the evaporation losses be replenished by the addition

of ALPHA 425 thinner to the flux until the desired specific gravity is obtained. The specific gravity can be determined by using a hydrometer. For optimum performance it is recommended that the specific gravity, (corrected to 25 °C) be maintained within the range 0.806 to 0.816. Please remember to check the temperature of your flux and adjust ambient density to standard density at 25 °C.

To maintain optimum fluxing performance during soldering and to ensure specified residue properties are maintained, the liquid flux in the reservoir should be completely replaced at least every 40 working hours. During flux replacement, thoroughly clean the foam generator with ALPHA 425 thinner.

Typical top side preheat temperatures are in the range 75 to 100 °C. As a general rule, the greater the thermal capacity and density of components, the higher the preheat required.

The removal of post soldering residues is optional. The residues are visible and may pose some difficulties with in circuit pin testing unless 3 or 5 multipoint heads are used. However, the residues are non-corrosive and safe to leave on the assembly.

For applications which specify cleaning, a water cleaning process using ALPHA 2110 saponifier, or semi-aqueous process using ALPHA Auto Clean 40 should be utilized.

TECHNICAL DATA

Item	Typical Values	Item	Typical Values
Appearance	Clear, colorless liquid	Flash Point (T.C.C.)	12 °C (53 °F)
Solids Content, %wt/wt	10	Recommended Thinner	ALPHA 425
Specific Gravity @ 25 °C (77 °F)	0.806 ± 0.005	Shelf Life (from Date of Mfg.)	540 Days
Halides	0.4%	IPC-SF-818 Classification	LR2NC or MR3NC
Water Extract Resistivity, ohm-cm	35,000		

CORROSION & ELECTRICAL TESTING

Corrosion Test

Test	Requirement	Results
Copper Mirror Test (MIL-F-14256)	No complete removal of copper	PASS
BS 5625 Copper Sheet	No evidence of corrosion	PASS
Copper Corrosion Test (IPC-SF-818, 10-day)	No evidence of corrosion	PASS

Corrosion Test (All results are in ohms.)

Method	Conditions	Requirement	Results
IPC-SF-818 Uncleaned	85 °C / 85%RH, 7 Days	1.0×10^8 minimum	4.3×10^9
IPC-SF-818 Cleaned	85 °C / 85%RH, 7 Days	1.0×10^8 minimum	5.0×10^9
IPC-SF-818 Control	85 °C / 85%RH, 7 Days	1.0×10^8 minimum	4.5×10^9

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 Assembly@MacDermidAlpha.com

www.macdermidalpha.com

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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