

# ALPHA® PF7223 2.5

## No-Clean Flux

### DESCRIPTION

**ALPHA PF7223 2.5** is an alcohol based, halide free synthetic flux used for the wave soldering of printed circuit boards. This product is suitable for use in the manufacture of commercial and high standard military or aerospace electronics. **ALPHA PF7223 2.5** meets the requirements of the DIN 8511 classification F-SW33.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### FEATURES & BENEFITS

- High surface insulation resistance resulting from very low solids content
- Bright solder joints and residue free surface that does not require cleaning
- Flux residues are dry and non-corrosive
- Outstanding soldering results in SMD technology
- Soldered boards are suited to in-circuit testing systems without cleaning

### APPLICATION GUIDELINES

Low solids content fluxes are applied preferably by spraying or by wave soldering. ALPHA PF7223 2.5 can also be applied by foaming with a suitable fluxing station. Observing the following recommendations will improve the foaming of low solids content fluxes.

- Foam Generator Tube with maximum 10 µm size porosity
- Fluxing nozzle should be as small as possible
- Frequent cleaning of the Foam Generator Tube
- Automatic level control of the flux with narrow minimum/maximum tolerance
- Regular control and correction of the flux density with the ALPHA PF7223 2.5 Thinner to maintain a constant solids content.

For best soldering results, the preheating temperature should be adjusted to give a top of board temperature of 90 to 100 °C.

Titration is recommended for control of quality of flux and the analytical method will be supplied on request. We recommend the flux to be discarded after 40 to 80 hours of operation to keep the contamination of the soldered boards constant and at the lower possible temperature.

**TECHNICAL DATA**

Item	Typical Values	Item	Typical Values
Appearance	Clear, Pale Yellow Solution	Flash Point (T.C.C.)	12 °C (53 °F)
Solids Content, %wt/wt	2.5	Recommended Thinner	ALPHA PF7723T
Specific Gravity @ 25 °C (77 °F)	0.795	Shelf Life (from Date of Mfg.)	360 Days
Acid Number (mg KOH/g)	19.2 ± 1.5	IPC Flux Classification	Type L3NC
Packaging Size	25 Liters		

**CORROSION & ELECTRICAL TESTING**
**Corrosion Test**

Test	Requirement	Results
Silver Chromate Paper Test (IPC / Bellcore Method)	No Detection of Halide	PASS
Copper Mirror Test (IPC / Bellcore Method)	No Complete Removal of Copper	PASS
Copper Corrosion Test (IPC-SF-818)	No Evidence of Corrosion	PASS

**IPC-SF-818 Surface Insulation Resistance (All values in ohms.)**

Test	Conditions	Requirement	Results
IPC-SF-818 Class 3, Un-cleaned	85 °C / 85% RH, 7 Days	1.0 X 10 <sup>9</sup> min	1.3 X 10 <sup>9</sup> min

**Bellcore Surface Insulation Resistance (All values in ohms.)**

Test	Conditions	Requirement	Results
"Comb-Up" Un-cleaned	35 °C / 85% RH	1.0 X 10 <sup>11</sup> min	9.3 X 10 <sup>11</sup> min
"Comb-Down" Un-cleaned	35 °C / 85% RH	1.0 X 10 <sup>11</sup> min	2.6 X 10 <sup>12</sup> min
Control	35 °C / 85% RH	2.0 X 10 <sup>11</sup> min	3.2 X 10 <sup>12</sup> min
Bellcore Test condition (per TR-NWT-000078, Issue 3): 35 °C / 85% RH, 5 days (4 days with bias voltage)			

**Bellcore Electromigration (All values in ohms.)**

Test	SIR (Initial)	SIR (Final)	Requirement	Result	Visual Result
"Comb-Up" Un-cleaned	10.2 X 10 <sup>9</sup>	6.7 X 10 <sup>9</sup>	SIR (Initial) / SIR (Final) < 10	PASS	PASS
"Comb-Down" Un-cleaned	3.8 X 10 <sup>9</sup>	5.2 X 10 <sup>9</sup>	SIR (Initial) / SIR (Final) < 10	PASS	PASS
Bellcore Test condition (per TR-NWT-000078, Issue 3): 85 °C / 85% RH, 500 hours with 10V bias					

**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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