

ALPHA PF7723 2.5

No Clean Flux

DESCRIPTION

ALPHA PF7723 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 PF7723 2.5 meets the requirements of the DIN 8511 classification F-SW33.

FEATURES & BENEFITS

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

APPLICATION

Low solids content fluxes are applied preferably by spraying or by wave soldering. ALPHA PF7723 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 max . 10µm size porosity.
- Fluxing nozzle as small as possible.
- Frequent cleaning of the Foam Generator Tube.
- Automatic level control of the flux with narrow minimal/maximal tolerance.
- Regular control and correction of the flux density with the ALPHA PF7723 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°C-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 40-80 hours of operation to keep the contamination of the soldered boards constant and at the lower possible temperature.

TECHNICAL SPECIFICATIONS

Parameters	Typical Values	Parameters/Test Method	Typical Values
Appearance	Clear, pal yellow solution	pH (5% aqueous solution)	
Solids content, wt/wt	2.5%	Recommended Thinner	ALPHA PF7725T
Acid number (mg KOH/g)	19.2 ± 1.5	Shelf life	360 days
Specific Gravity @ 25°C (77°F)	0.795	Container size availability	25Ltr
Pounds per gallon		Bellcore TR-NWT-000078, Issue 3 complaint	
Flash point (T.C.C)	12°C (53°F)	IPC J-STD-004 Designation	

CORROSION AND ELECTRICAL TESTING

CORROSION TESTING

Test	Requirement	Results
Copper Mirror (IPC/Bellcore Method)	No complete removal of copper	Passes
Halide – Silver Chromate Paper Test (IPC/Bellcore Method)	No detection of halide	Passes
IPC-SF-818 Copper Corrosion Test	No evidence of corrosion	Passes
IPC Flux Classification	Type L3NC	

SURFACE INSULATION RESISTANCE (All values in Ohms)

Method	Conditions	Requirement	Results
IPC-SF-818	85°C/85% RH	1.1×10^9 min	1.3×10^9
Class 3, Not cleaned	7 days		

BELLCORE-TR-NWT-000078, Issue 3

Comb Pattern “up” (uncleaned)	35°C/85% RH 5 days (4 days with bias voltage)	1.0×10^{11} min	9.3×10^{11}
Comb Pattern “down” (uncleaned)	35°C/85% RH 5 days (4 days with bias voltage)	1.0×10^{11} min	2.6×10^{12}
Control Boards	35°C/85% RH 5 days (4 days with bias voltage)	2.0×10^{11} min	3.2×10^{12}

ELECROMIGRATION (Per Bellcore TR-NWT-000078, Issue 3, All values in Ohms)

Method	Conditions	SIR (Init.)*	Sir (Final)*	Visual
Comb Pattern “up”	85°C/85% RH 10 V. 500hrs with bias	10.2×10^9	6.7×10^9	No dendrites of corrosion
Comb Pattern “down”	85°C/85% RH 500hrs with 10 V bias	3.8×10^9	5.2×10^9	No dendrites of corrosion

HEALTH & SAFETY

Observe standard precautions for handling and use. Use in well ventilated areas. DO NO SMOKE. Avoid prolonged repeated contact with the skin and use of solvent resistant gloves. Avoid contact with eyes. Flammable, keep away from sparks and open flames. Remember empty containers can still be flammable hazard from residue vapours. Remove skin splashes by immediate washing with soap and water.

In order to carry out your full COSHH assessment, please consult the product Material Safety Data Sheet (MSDS).4

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