



TECHNICAL DATA SHEET

K8418A

No-Clean Flux

(1) Description K8418A adds special activator and trace rosin. It has excellent soldering ability (low defect rate) and low solid content. It can handle surfaces that are not easy to solder (such as the top of the part or the soldering lining). It is especially suitable for organic matter or rosin coating bare copper board, and there is very little residue after wave soldering. K8418A no-clean flux has the widest process window and long-term electrical reliability. K8418A products comply with RoHS and REACH international environmental protection standards.

- Features**
- Excellent soldering ability and low defect rate
 - Ultra-low residue
 - No-clean, cost-down
 - Long term electrical reliability corresponds to JIS standard.

Application Suitable for wave soldering operations (spray, foaming system)

(2) Specifications

Items	Specification
Flux Type	ROL0
Appearance	Pale Yellow Liquid
Specific Gravity at 25°C	0.795+/- 0.005
Acid Value (mgKOH/g)	18+/-2
Flash Point (T.C.C.)	13°C
Solid Content (%)	4.0+/-0.50%

(3) Operation Guideline

To ensure consistent soldering performance and electrical reliability, it is necessary to set-up IQC standards for PCBs and devices.

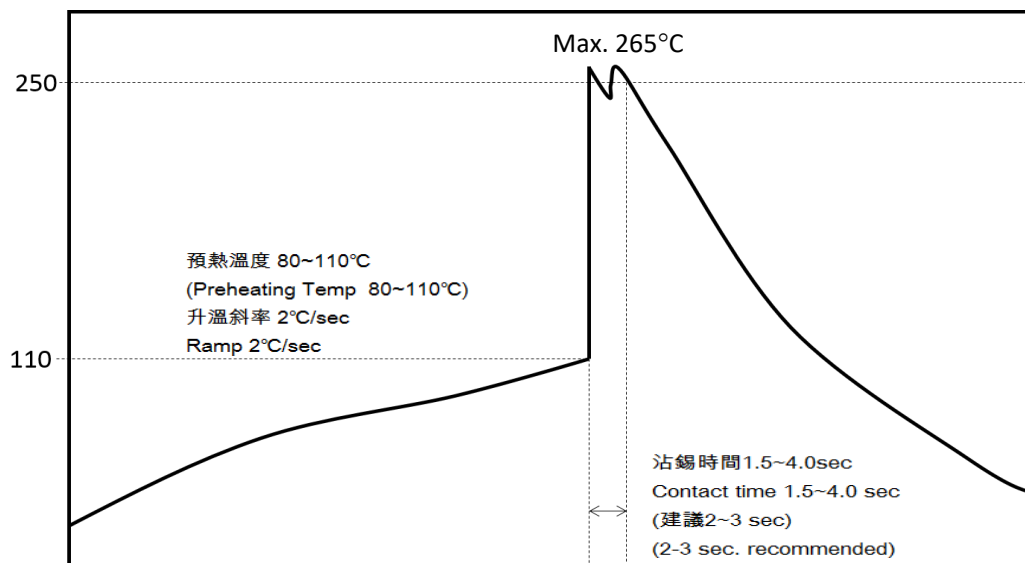
1. Compressed air should be free from any moisture and oil.
2. Adjust the air pressure to control the height of bubbling, the flux level should be 1-1.5" (2.5~3.8cm) higher than the bubble tube.
3. To add thinner 3000 for keeping its activity during operation is recommended. Either by checking the acid value every 2-4hrs (standard values : 13-23mgKOH/g, by acidimetry), or the specific gravity, the range of sp.gr. should be within 0.785~0.805 at 25°C . It is not necessary to measure acid value and specific gravity if process equipment is closed system.
4. To keep the best performance of flux, we suggest renewal of the flux reservoir content every 40~50 working hours.

Lead-Free Wave Soldering Guidelines

Item	Recommended Operation Conditions
Flux coating weight	Spary $\frac{1,100\sim 1,500\mu\text{g}}{\text{in}^2}$ of solids/in ² dual wave $\frac{1,000\sim 1,200\mu\text{g}}{\text{in}^2}$ of solids/in ² single wave
Forming Application	
Foam stone pore size	20-50 μm
Distance that top of stone is submerged below flux	25-40mm
Foam fluxer Chimney opening	10-13mm
Forming with an Air knife	
Air knife hole dia.	1-1.5mm
Distance between Holes	4-5mm
Distance from fluxer to air knife	100-150mm
Air knife angle back toward fluxer from Perpendicular	3-5°
Preheating temp.	
Top-side of PCB	85°C ~ 120°C
Bottom-side of PCB	30°C higher than Top-side of PCB
Heating rate	Max. 2°C / sec.
Conveying speed	Dual wave: 1.0m ~ 1.8m / min. Single: 0.7m ~ 1.6m / min.
Inclined angle	5° ~ 8° (6° recommended)
Contact time	1.5 ~ 4.0 sec. (2~3 sec. is recommended)
Solder temp.	250°C ~ 270°C

Note : The recommended conditions are for references only. Adjust according to the difference of facility and parts.

Suggested operation temperature profile



(4) Reliability

1. Corrosion Test

Item	ROLO Requirement	Result	Standard
Copper Mirror Corrosion Test	No complete removal of copper	Pass	IPC-TM650 2.3.32
Copper Corrosion Test	No evidence of corrosion	Pass	IPC-TM650 2.6.15
Silver Chromate Test	No Detection of Halide	Pass	IPC-TM-650 2.3.33

2. Surface Insulation Resistance (JIS Standard)

Item	Condition	Requirement	Result
In The Beginning	Surrounding Condition	Min. $1.0 \times 10^{11} \Omega$	$1.2 \times 10^{12} \Omega$
After 168 hours	40°C / 90% RH, 168 hours	Min. $1.0 \times 10^{10} \Omega$	$2.7 \times 10^{11} \Omega$
After Recovery	25°C / 75% RH	Min. $1.0 \times 10^{11} \Omega$	$1.0 \times 10^{12} \Omega$

Test Condition : Corresponding to IPC B25 (0.32mm in width, 0.32mm in spacing)
Voltage: DC 100V

3. Surface Insulation Resistance IPC (J-STD-004)

Item	Condition	Requirement	Result
Comb-Down	85°C / 85% RH, 168 hours	Min. $1.0 \times 10^8 \Omega$	$1.0 \times 10^9 \Omega$
Comb-Up	85°C / 85% RH, 168 hours	Min. $1.0 \times 10^8 \Omega$	$9.3 \times 10^9 \Omega$
Control Panel	85°C / 85% RH, 168 hours	Min. $1.0 \times 10^9 \Omega$	$8.6 \times 10^9 \Omega$

Test condition: All measurements are conducted by IPC-B-25 board (0.4mm in width, 0.5mm in spacing),
Voltage: DC 100V

- (5) **Recommended Products** To achieve best performance, the relevant products are recommended :
1. Thinner 3000
2. C3110 Saponifying Detergent
- (6) **Product expiry date and storage conditions** 1 Year in normal storage condition
Store in cool place with good ventilation, avoid direct sunlight
- (7) **Package** 20 liter /pail or 200L/drum
- (8) **Safety cautions** Inflammable product, keep away from fire.
Others please refer to SDS

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