Kester 950 F

LOW SOLID, NO CLEAN

General Information

Kester 950 F is a halogen-free, non rosin organic flux designed for wave soldering conventional and surface mount circuit board assemblies. The low solid content (2,4% theory; 5min 110°C 4,1%) and nature of activator system results in practically NO RESIDUES left on the assembly after soldering. Boards are dry and cosmetically clean as they exit the wave solder machine. There are no residues to interfere with electrical testing and the expense of cleaning is eliminated.

Kester 950 F is exhibiting improved soldering performance to minimize soldering bridges (shorts) and excessive solder defects. This flux is suitable for automotive, computer, telecommunications and other applications where reliability con-siderations are critical. The surface insulation resistance on soldered boards is higher than that provided by typical organic water-soluble fluxes.

Performance Characteristics

- Eliminates the expense of cleaning
- Improved soldering performance
- Non-corrosive and halogen-free
- No surface insulation resistance degradation

Application

The flux can be applied by spraying or foam equipment. The optimum preheat temperature for many circuit board assemblies is 93-110 °C as measured on the top side of the circuit board. The combination of board design, length of contact time with molten solder, solder wave shape, speed or solder flow and preheating time can all affect the optimum preheat temperature required and the necessary parameters to optimize soldering performance.

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Physical Properties	950 F	Thinner 108
• Specific gravity (23°C) DIN 51757	0,809 g/cm³	0,798 g/cm³
• Solid content (%) (5min110°C)	4,1 +/- 0,1	n.a.
• Acid number DIN 53402	18,3-19,3 mg KOH/g	n.a.
• Flash point DIN 51755	12 °C	12 °C
• Autoignition temperature DIN 51794	634 °C	634 °C
• Copper mirror IPC-TM-650 2.6.15	pass	n.a.
• PH-value (pur flux)	5	n.a.

Qualitative Halide Tests:

- **Silver Chromate:** Pass
Tested to J-STD-004. IPC-TM-650. Method 2.3.33

- **Fluorides by Spot Test:** Pass
Tested to J-STD-004. IPC-TM-650. Method 2.3.35.1

Quantitative Halide Tests:

Chlorides and Bromides: Not applicable
Tested to J-STD-004. IPC-TM-650. Method 2.3.35

Fluorides by Spot Test: Not applicable
Tested to J-STD-004. IPC-TM-650. Method 2.3.35.2

Typical S.I.R., IPC:
Tested to J-STD-004. IPC-TM-650. Method 2.6.3.3

	days	Comp pattern	Climate	Pattern up (Ω)	Pattern down (Ω)
950F	11	B-25	85°C/85%	1x 10^{10}	1x 10^{10}
Blanc	11	B-25	85°C/85%	1x10^{12}	
950F	12	B-25	35°C/85%	6,0 x 10^{11}	1,8 x 10^{11}
Blanc	12	B-25	35°C/85%	6 x 10^{11}	

Surface Insulation Resistance (per Bellcore TR-NWT-000078 Issue3, December 1991)

Test conditions --40°C, 93% Relative Humidity
Test boards -- 25mil lines, 50 mil spaces; 45-50 volts bias applied during the life of test, readings are taken after an applied voltage of 100 volts for one minute.

Insulation Resistance (8 days)

Pattern up	1,9 x 10^{10} Ω
pattern down	1,4 x 10^{10} Ω
unsoldered control	1,5 x 10^{10} Ω

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