186
Mildly Activated Rosin Liquid Flux Pen®
For Lead-bearing and Lead-free alloys

Product Description

Kester 186 Flux Pen® is specifically designed for leaded and lead-free rework of conventional and surface mount circuit board assemblies. Kester 186 under MIL-F-14256, was QPL approved as Type RMA. Although the fluxing ability approaches that of Type RA flux, residues after soldering are non-corrosive and non-conductive. Kester 186 has been developed for use in critical applications where difficult assemblies are to be soldered, but process requirements stipulate use of Type RMA flux. Kester 186 possess high thermal stability for soldering multi-layer assemblies which require higher temperatures. Exposure to high preheat temperatures does not degrade solubility of the residue in normal cleaning solvents. There is no surface insulation resistance degradation caused by the flux residue. The use of a minimum of ionic activating agents and the inactive nature of the residue permits leaving the residue on circuit board assemblies for many applications. The flux residue is also moisture and fungus resistant.

Performance Characteristics:

- High thermal stability
- Improves soldering performance
- Eliminates the need and expense of cleaning
- Classified as ROL0 per J-STD-004

RoHS Compliance

This product meets the requirements of the RoHS (Restriction of Hazardous Substances) Directive, 2002/95/EC Article 4 for the stated banned substances.

Physical Properties

Specific Gravity: 0.879 ± 0.003
Antoine Paar DMA 35 @ 25°C

Percent Solids (typical): 36
Tested to J-STD-004, IPC-TM-650, Method 2.3.34

Acid Number (typical): 55.5 mg KOH/g of flux
Tested to J-STD-004, IPC-TM-650, Method 2.3.13

Reliability Properties

Copper Mirror Corrosion: Low
Tested to J-STD-004, IPC-TM-650, Method 2.3.32

Corrosion Test: Low
Tested to J-STD-004, IPC-TM-650, Method 2.6.15

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

Chloride and Bromides: 0.02%
Tested to J-STD-004, IPC-TM-650, Method 2.3.35

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

SIR, IPC (typical): Pass
Tested to J-STD-004, IPC-TM-650, Method 2.6.3.3

	Blank	186
Day 1	$5.0 \times 10^9\ \Omega$	$3.1 \times 10^9\ \Omega$
Day 4	$5.8 \times 10^9\ \Omega$	$4.9 \times 10^9\ \Omega$
Day 7	$6.3 \times 10^9\ \Omega$	$5.5 \times 10^9\ \Omega$

Application Notes

Flux Application:

Kester 186 is applied to circuit boards via Flux Pen® for rework of printed wire assemblies.

Process Considerations:

Kester 186 should only be applied to areas that will be fully heated by the soldering iron or other reflow tool. Care should be taken to avoid flooding the assembly. The surface tension has been adjusted to help the flux form a thin film on the board surface allowing rapid solvent evaporation.

Cleaning:

Kester 186 flux residues are non-conductive, non-corrosive and do not require removal in most applications.

Storage and Shelf Life:

Kester 186 is flammable. Store away from sources of ignition. Shelf life is 2 years from date of manufacture when handled properly and held at 10-25°C (50-77°F).

Health & Safety:

This product, during handling or use, may be hazardous to health or the environment. Read the Material Safety Data Sheet and warning label before using this product.

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