

951

Low-Solids No-Clean Flux Pen[®]

Product Description

Kester 951 is a halogen-free, non-rosin organic Flux Pen[®] that is specifically designed for rework of conventional and surface mount circuit board assemblies. The extremely low solids content (2.0%) and nature of the activator system results in practically NO RESIDUE left on the assembly after soldering. There are no residues to interfere with electrical testing. Kester 951 exhibits improved soldering performance to minimize solder bridges (shorts) during rework operations. This flux is suitable for automotive, computer, telecommunications and other applications where reliability considerations are critical. The surface insulation resistance on soldered boards is higher than that provided by typical organic water-soluble fluxes. Kester 951 contains a corrosion inhibitor such that no corrosion products are formed when bare copper surfaces are exposed to humid environments.

Performance Characteristics:

- Improves soldering performance
- Eliminates the need and expense of cleaning
- Non-corrosive tack-free residues
- Classified as ORL0 per J-STD-004
- Compliant to Bellcore GR-78

Physical Properties

Specific Gravity: 0.789 ± 0.003

Antoine Paar DMA 35 @ 25°C

Percent Solids (theoretical): 2.0

Acid Number (typical): 14.3 mg KOH/g of flux

Tested by potentiometric titration

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: None Detected

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

	<u>Blank</u>	<u>951</u>
Day 1	$2.3 \times 10^{10} \Omega$	$9.4 \times 10^9 \Omega$
Day 4	$1.3 \times 10^{10} \Omega$	$7.8 \times 10^9 \Omega$
Day 7	$9.8 \times 10^9 \Omega$	$6.3 \times 10^9 \Omega$

Application Notes

Flux Application:

Kester 951 is applied to circuit boards via Flux Pen® for rework of printed wire assemblies.

Process Considerations:

Kester 951 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 951 flux residues are non-conductive, non-corrosive and do not require removal in most applications.

Storage and Shelf Life:

Kester 951 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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