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# 951 FLUX-PEN®

## Low-Solids No-Clean Flux-Pen®

### Product Description

Kester 951 Flux-Pen® is a halogen-free, non-rosin 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. 951 Flux-Pen® 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. 951 Flux-Pen® 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
- Compliant to GR-78-CORE
- Classified as ORL0 per J-STD-004

### RoHS Compliance

This product meets the requirements of the Restriction of Hazardous Substances (RoHS) Directive, 2011/65/EU for the stated banned substances.

### Physical Properties

**Specific Gravity:** 0.814  
 Anton Paar DMA @ 25°C

**Percent Solids (theoretical):** 2.0%

**Acid Number (typical):** 14.3 mg KOH/g flux  
 Tested by potentiometric titration

### Reliability Properties

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

**Chloride and Bromides:** None Detected  
 Tested to J-STD-004, IPC-TM-650, Method 2.3.35

**SIR, IPC (typical):** Pass  
 Tested to J-STD-004, IPC-TM-650, Method 2.6.3

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

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

	Blank	951
Day 1	2.3 × 10 <sup>10</sup> Ω	9.4 × 10 <sup>9</sup> Ω
Day 4	1.3 × 10 <sup>10</sup> Ω	7.8 × 10 <sup>9</sup> Ω
Day 7	9.8 × 10 <sup>9</sup> Ω	6.3 × 10 <sup>9</sup> Ω

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

# Application Notes

## Flux Application

951 Flux-Pen<sup>®</sup> is applied to circuit boards via Flux-Pen<sup>®</sup> for rework of printed wire assemblies.

## Process Considerations

951 Flux-Pen<sup>®</sup> 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

951 Flux-Pen<sup>®</sup> flux residues are non-conductive, non-corrosive and do not require removal in most applications.

## Storage, Handling and Shelf Life

951 Flux-Pen<sup>®</sup> is flammable. Store away from sources of ignition. Shelf life is 1 year from the date of manufacture when handled properly and held at 10-25°C (50-77°F). The cap must be in place when not being used.

## Health and Safety

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