

## 186 Flux-Pen®

Mildly Activated Rosin Flux-Pen for Leaded and Lead-free Alloys

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### Product Description

Kester 186 Flux-Pen is specifically designed for leaded and lead-free rework of conventional and surface mount circuit board assemblies. 186 Flux-Pen 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. 186 Flux-Pen has been developed for use in critical applications where difficult assemblies are to be soldered, but process requirements stipulate use of Type RMA flux. 186 Flux-Pen 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 & J-STD-004B

### RoHS Compliance

This product meets the requirements of the Restriction of Hazardous Substances (RoHS) Directive. Additional RoHS information is located at <https://www.kester.com/downloads/environmental>.

### Physical Properties

**Specific Gravity:** 0.879

Anton Paar DMA @ 25 °C

**Flash Point:** 18 °C (64 °F)

**Percent Solids (theoretical):** 36%

IPC-TM-650, Method 2.3.34

**Acid Number (typical):** 55 mg KOH/g flux

IPC-TM-650, Method 2.3.13

## Reliability Properties

**Copper Mirror Corrosion:** Low

IPC-TM-650, Method 2.3.32

**Corrosion Test:** Low

IPC-TM-650, Method 2.6.15

**Silver Chromate:** Pass

IPC-TM-650, Method 2.3.33

**Chloride and Bromides:** 0.02%

IPC-TM-650, Method 2.3.35

**Electrochemical Migration (ECM):** Pass

IPC-TM-650 Method 2.6.14.1 [65 °C, 85% RH, 100V, 21days]

**Surface Insulation Resistivity (SIR):** Pass

IPC-TM-650, Method 2.6.3.7

**Surface Insulation Resistivity (SIR):** Pass

IPC-TM-650, Method 2.6.3.3

## Flux Application

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

## Process Considerations

186 Flux-Pen 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

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

## Recycling Services

We provide safe and efficient recycling services to help companies meet their environmental and legislative requirements and at the same time, maximize the value of their waste streams.

Our service collects solder dross, solder scrap, and various forms of solder paste waste. Please contact your local sales representative for recycling capabilities in your area or [link here](#).



## Storage, Handling and Shelf Life

186 Flux-Pen is flammable. Store away from sources of ignition. Shelf life is 2 years from date of manufacture when handled properly and held at 10 to 25 °C (50 to 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. Safety Data Sheets are available at this [link](#).

## Contact Information

To confirm this document is the most recent version, please contact [Assembly@MacDermidAlpha.com](mailto:Assembly@MacDermidAlpha.com)

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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