

## 2331-ZX Flux-Pen<sup>®</sup>

Organic Water Soluble Flux-Pen for Leaded and Lead-free Alloys

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### Product Description

Kester 2331-ZX Flux-Pen is designed for leaded and lead-free rework of conventional and surface mount circuit board assemblies. 2331-ZX Flux-Pen is an innovation in organic acid water soluble flux chemistry for soldering circuit board assemblies. This unique, neutral pH chemistry flux provides the best ionic cleanliness of any organic water soluble flux available to the electronics industry. This popular flux has been used for soldering critical assemblies in the telecommunications, computer and other industries. No offensive odors will be emitted during soldering. 2331-ZX Flux-Pen will not create excessive foaming in standard water cleaning systems. 2331-ZX Flux-Pen has good soldering properties for improved productivity without sacrificing reliability of the assembly. This flux does not attack properly cured solder masks or FR-4 epoxy-glass laminate. 2331-ZX Flux-Pen is not detrimental to the surface insulation resistance of the soldered assembly. Use of this flux minimizes cleaning costs while complying with environmental regulations.

### Performance Characteristics:

- High activity
- Chemically compatible with most solder masks and board laminates
- pH Neutral Chemistry
- Classified as ORH1 per J-STD-004

### RoHS Compliance

This product meets the requirements of the Restriction of Hazardous Substances (RoHS) Directive, 2015/863 for the stated banned substances.

### Physical Properties

**Specific Gravity:** 0.899 ± 0.005

Anton Paar DMA @ 25 °C

**Percent Solids (Theoretical):** 33%

Tested to J-STD-004, IPC-TM-650, Method 2.3.34

### Reliability Properties

**Copper Mirror Corrosion:** High

Tested to J-STD-004, IPC-TM-650, Method 2.3.32

**Corrosion Test: High**

Tested to J-STD-004, IPC-TM-650, Method 2.6.15

**Silver Chromate: Fail**

Tested to J-STD-004, IPC-TM-650, Method 2.3.33

**Chloride & Bromide: 2.2%**

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

**Surface Insulation Resistance (SIR) IPC (Typical): Pass**

Tested to J-STD-004, IPC-TM-650, Method 2.6.3.3

	Blank	2331-ZX
Day 1	$1.2 \times 10^{10} \Omega$	$3.4 \times 10^8 \Omega$
Day 4	$8.7 \times 10^9 \Omega$	$1.4 \times 10^9 \Omega$
Day 7	$8.6 \times 10^9 \Omega$	$1.8 \times 10^9 \Omega$

**Flux Application**

2331-ZX Flux-Pen is applied to circuit boards via Flux-Pen for rework of printed wire assemblies.

**Process Considerations**

2331-ZX 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**

Flux residues after soldering must be removed as they are conductive and corrosive. No neutralizer, saponifiers or detergents are necessary in the water wash system for complete removal of flux residues. It is not recommended to use high mineral content tap water. Otherwise, tap, deionized or softened water may be used for cleaning. The optimum water temperature is 54 to 66 °C (130 to 150 °F), although lower temperatures may be sufficient.

## 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

2331-ZX Flux-Pen is flammable. Store away from sources of ignition. Shelf life is 2 years from the 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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