

## 2331-ZX

### Organic Water-Soluble Liquid Flux Pen®

For Lead-bearing and Lead-free alloys

#### Product Description

Kester 2331-ZX Flux Pen® is designed for leaded and lead-free rework of conventional and surface mount circuit board assemblies. Kester 2331-ZX 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. Kester 2331-ZX will not create excessive foaming in standard water cleaning systems. Kester 2331-ZX 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. Kester 2331-ZX 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 RoHS (Restriction of Hazardous Substances) Directive, 2002/95/EC Article 4 for the stated banned substances.

#### Physical Properties

**Specific Gravity:** 0.899 ± 0.005

Antoine Paar DMA 35 @ 25°C

**Percent Solids (typical):** 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 and Bromides:** 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

**SIR, IPC (typical):** Pass

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

|       | <u>Blank</u>                | <u>2331-ZX</u>           |
|-------|-----------------------------|--------------------------|
| 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 | $8.6 \times 10^9 \Omega$    | $1.8 \times 10^9 \Omega$ |

## Application Notes

### Flux Application:

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

### Process Considerations:

Kester 2331-ZX 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 54-66°C (130-150°F), although lower temperatures may be sufficient.

### Storage and Shelf Life:

Kester 2331-ZX is flammable. Store away from sources of ignition. Shelf life is 1 year 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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