# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# 331 Organic Cored Wire for Lead-Free and Leaded Alloys

# Product Description

Kester 331 organic flux is a water-soluble formula for use in flux-cored solder wire. This cored solder version of the popular 2331-ZX Neutral Organic Water Soluble Liquid Flux is more effective than rosin fluxes in soldering difficult metals. The same fast action and mild properties are exhibited with 331 Organic Flux as with the liquid 2331-ZX. The flux is more heat stable than most organic fluxes, resulting in minimal smoke and odor. The residue can be completely removed with a simple heated water rinse. Deionized water is suggested to prevent introduction of chemistries from unknown water sources.

#### **Performance Characteristics:**

- Excellent solderability to a wide variety of metalizations
- Easy removal in hot DI water
  Compatible with leaded and leadfree alloys
- Classified as ORH1 per J-STD-004

# **RoHS** Compliance

Kester does not determine any applicable Restriction of Hazardous Substances (RoHS) exemptions for our lead containing products at the user level. (Applies only if this core flux is combined with a lead-free alloy)

# 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: 1.2% 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), (typical): Pass

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

	Blank	331
Day 1	1.9*10 <sup>10</sup> Ω	2.0*10 <sup>9</sup> Ω
Day 4	2.2*10 <sup>10</sup> Ω	7.8*10 <sup>9</sup> Ω
Day 7	1.7*10 <sup>10</sup> Ω	4.1*10 <sup>9</sup> Ω

# **Application Notes**



# Availability

331 is available in a wide variety of alloys, wire diameters and flux percentages. The most common alloys are Sn63Pb37, Sn96.5Ag3.0Cu0.5 and K100LD. Please refer to www.kester.com for wire diameters, flux percentages and roll sizes that are available.

Note: Core size 50, 58 and 66 = 1.1%, 2.2% and 3.3% flux core.

### Process Considerations

Solder iron tip temperatures are most commonly between 315-343°C (600-650°F) for Sn63Pb37 and Sn62Pb36Ag02 alloys, and 371-400°C (700-750°F) for lead-free alloys. Heat both the land area and component lead to be soldered with the iron prior to touching the land with the cored wire. Do not apply the wire directly to the soldering iron tip. If needed, Kester 2331-ZX organic flux may be used as a compatible liquid flux to aid in reworking soldered joints. Kester 2331-ZX is available in Flux-Pens.

# Cleaning

The 331 flux residue is conductive and will cause corrosion of metal parts over time. Residue removal should be completed within 48 hours. 331 Organic Flux has the advantage over many competitive water-soluble flux formulations in that the residue is easily and completely removed with plain hot water (120°F-140°F degrees). Softened tap water or deionized water is recommended for high reliability. Use of hard or high mineral content tap water will increase ionic cleanliness measurements.

### Storage and Shelf Life

Storage must be in a dry, non-corrosive environment. The surface may lose its shine and appear a dull shade of gray. This is a surface phenomena and is not detrimental to product functionality. Flux cored solder wire has a limited shelf life determined by the alloy used in the wire. For alloys containing more than 70% lead, the shelf life is two years from the date of manufacture. Other alloys have a shelf life of three years from the date of manufacture.

### $\otimes$ Health and Safety

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