

# KESTER® 331 FLUX-CORED WIRE

## Organic Cored Wire for Lead-free and Leaded Alloys

### DESCRIPTION

Kester 331 Flux-Cored Wire is a water soluble formula for use in flux-cored solder wire. This cored solder version of Kester’s popular 2331-ZX Soldering 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.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### FEATURES & BENEFITS

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

### ROHS COMPLIANCE

MacDermid Alpha 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.)

### TECHNICAL DATA

Category	Results	Procedure/Remarks
<b>Reliability Properties</b>		
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

Category	Results	Procedure/Remarks	
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	
		<b>Blank</b>	<b>331</b>
	Day 1	$1.9 \times 10^{10} \Omega$	$2.0 \times 10^9 \Omega$
	Day 4	$2.2 \times 10^{10} \Omega$	$7.8 \times 10^9 \Omega$
	Day 7	$1.7 \times 10^{10} \Omega$	$4.1 \times 10^9 \Omega$

**PROCESSING GUIDELINES**

Solder iron tip temperatures are most commonly between 315 to 343 °C (600 to 650 °F) for Sn63Pb37 and Sn62Pb36Ag02 alloys, and 371 to 400 °C (700 to 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. 2331-ZX is available in as a Flux-Pen®.

**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 to 140 °F). 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, Handling and Shelf Life**

Storage must be in a dry, non-corrosive environment between 10 to 40 °C (50 to 104 °F). The surface may lose its shine and appear a dull shade of grey. This is a surface phenomenon and is not detrimental to product functionality. Flux-cored solder wire has a shelf life determined by the alloy used in the wire. For alloys containing more than 70% lead, the shelf life is 2 years from the date of manufacture. Other alloys have a shelf life of 3 years from the date of manufacture.

**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.

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

**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.



**SAFETY & WARNING**

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

**CONTACT INFORMATION**

[www.macdermidalpha.com](http://www.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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