

## 48 Flux-Cored Wire

Activated Rosin Cored Wire for Lead-free and Leaded Alloys

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### Product Description

Kester 48 Flux-Cored wire is an activated rosin flux for cored solder wire designed for lead-free applications to enable soldering of most common metals. 48 has performance characteristics far exceeding standard RA fluxes. 48 builds on the performance of its predecessor Kester 44 Flux-Cored Wire with “instant-action” wetting to provide fast and reliable solder joints.

### Performance Characteristics:

- Unparalleled wetting performance
- Excellent solderability and fast wetting to a variety of surface finishes
- Eliminates the need and expense of cleaning
- Low spattering
- Low smoke and odor
- Classified as ROM1 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: Low

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

#### Corrosion Test: Low

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

#### Fluorides by Spot Test: Pass

Tested to J-STD-004, IPC-TM-650, Method 2.3.35.1

#### Chloride and Bromides: 1.05%

Tested to J-STD-004, IPC-TM-650, Method 2.3.35

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

Tested to J-STD-004B, IPC-TM-650, Method 2.6.3.7

**Surface Insulation Resistance (SIR) (typical): Pass**

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

	Blank	48
Day 1	1.6*10 <sup>10</sup> Ω	1.1*10 <sup>10</sup> Ω
Day 4	1.2*10 <sup>10</sup> Ω	9.2*10 <sup>9</sup> Ω
Day 7	1.1*10 <sup>10</sup> Ω	8.6*10 <sup>9</sup> Ω

**Spread Test (typical):**

Tested to J-STD-004, IPC-TM-650, Method 2.4.46

Flux-Cored Solder	Area of Spread mm <sup>2</sup> (in <sup>2</sup> )	
	Sn96.5Ag3.0Cu0.5	Sn63Pb37
285	213 (0.33)	335 (0.52)
275	219 (0.34)	361 (0.56)
44	220 (0.34)	342 (0.53)
48	245 (0.38)	419 (0.65)

**Availability**

48 is available in a wide variety of alloys, wire diameters and flux percentages and roll sizes. The most common alloys are Sn96.5Ag3.0Cu0.5 and K100LD. Please refer to <https://www.kester.com> for more information.

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 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 apply the solder wire to the land area or component lead. Do not apply the wire directly to the soldering iron tip; doing so will shorten the life of the soldering tip.

Additional liquid flux should only be used as a last resort. Any flux applied to the solder location should be kept to the area of the connection being reworked. If needed, Kester 186 or Kester NF372-TB may be used as a compatible liquid fluxes to aid in reworking soldered joints. 186 and NF372-TB are also available in Flux-Pens<sup>®</sup> for optimum board cleanliness.

## Cleaning

48 possesses excellent fluxing ability, the flux residue is non-corrosive and non-conductive and do not require removal for most applications under normal conditions of use. IPA will not clean the residues off the surface of the circuit board after the soldering process. A saponifier or cleaning agent specifically designed to clean a rosin-based flux is required to clean the residues. Please contact Kester Technical Support for further information.

## 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.

## 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 <https://www.kester.com/downloads/sds>.

## 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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