

# 285

## Mildly Activated Rosin Cored Wire

### For Lead-bearing and Lead-free alloys

#### Product Description

Kester 285 mildly activated rosin flux is classified as Type ROL0 flux under IPC J-STD-004. This flux was formerly classified as Type RMA per MIL-F-14256. Kester 285 consists of high quality, purified rosin to which a synergistic combination of activating agents has been incorporated. The fluxing ability of 285 is much greater than ordinary mildly activated rosin fluxes and is comparable to fully activated rosin fluxes. Kester 285 has been developed for use in the electronic industry where difficult assemblies are to be soldered, but process requirements stipulate use of a mildly activated rosin flux.

#### Performance Characteristics:

- Industry standard RMA cored wire
- Compatible with leaded and lead-free alloys
- Classified as ROL0 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. (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: Pass

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

##### Chloride and Bromides: None Detected

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

	<b>Blank</b>	<b>285</b>
Day 1	$1.0 \times 10^{10} \Omega$	$3.2 \times 10^9 \Omega$
Day 4	$9.5 \times 10^9 \Omega$	$7.7 \times 10^9 \Omega$
Day 7	$8.3 \times 10^9 \Omega$	$7.0 \times 10^9 \Omega$

##### Spread Test (typical):

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

Flux Core Solder	Area of Spread mm <sup>2</sup> (in <sup>2</sup> )	
	Cu	Ni
285 Mildly Activated Rosin	335 (0.52)	140 (0.22)
282 Mildly Activated Rosin	240 (0.37)	100 (0.16)
44 Fully Activated Rosin	280 (0.43)	160 (0.25)

## Application Notes

### Availability:

Kester 285 is available in a wide variety of alloys, wire diameters and flux percentages. For most applications, Sn63Pb37 or Sn96.5Ag3.0Cu0.5 is used. Consult the alloy temperature chart in Kester's product catalog for a comprehensive alloy list. The standard wire diameter for most applications is 1.00mm (0.031in). Wire diameters range from 0.25 - 6.00mm (0.010 to 0.250in). A "Standard Wire Diameters" chart is included in Kester's product catalog. The amount of flux in the wire dictates the ease of soldering for an application. For most applications, core 66 (3.3% flux by weight) is recommended. Other core sizes, 50 and 58, (1.1% and 2.2% respectively) are available. Kester 285 is packaged on spools of different sizes to accommodate a variety of applications.

### Process Considerations:

Solder iron tip temperatures are most commonly between 315-371°C (600-700°F) for Sn63Pb37 and Sn62Pb36Ag02 alloys and 371-427°C (700-800°F) for lead-free alloys. Heat both the land area and component lead to be soldered with the iron prior to adding Kester 285 cored wire. Apply the solder wire to the land area or component lead. Do not apply the wire directly to the soldering iron tip. If needed, Kester 186 and 186-18 Mildly Activated Rosin Flux may be used as a compatible liquid flux to aid in reworking soldered joints. Kester 186 and 186-18 Mildly Activated Rosin Flux are also available in Flux-Pens® for optimum board cleanliness.

### Cleaning:

Kester 285 flux residues are non-corrosive, non-conductive and do not require removal in most applications.

### Storage, Handling, and Shelf Life:

Storage must be in a dry, non-corrosive environment. The surface may lose its shine and appear a dull shade of grey. 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 > 70% lead, the shelf life is two years from date of manufacture. Other alloys have a shelf life of three years from date of manufacture.

### 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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