

# 44

## Activated Rosin Cored Wire

### Product Description

Kester 44 Rosin Flux is an activated rosin formula for use in flux-cored solder wire. Kester 44 Rosin Flux has virtually dominated the field of activated rosin core solders for well over four decades. An outstanding performance feature of this flux is the "instant-action" wetting behavior. The high mobility and fast-spreading action of this flux results in more reliable production line soldering.

#### Performance Characteristics:

- High activity RA formulation
- Excellent solderability to a wide variety of metallizations
- Industry standard RA cored wire for decades
- Classified as ROM1 per J-STD-004

### Reliability Properties

#### **Copper Mirror Corrosion: Moderate**

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

#### **Corrosion Test: Moderate**

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: 0.44%**

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

## Application Notes

### Availability:

Kester 44 is available in a wide variety of alloys, wire diameters and flux percentages. For most applications, Sn63Pb37. 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 also 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 44 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. Heat both the land area and component lead to be soldered with the iron prior to adding Kester 44 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 Mildly Activated Rosin Flux may be used as a compatible liquid flux to aid in reworking soldered joints. Kester 186 Mildly Activated Rosin Flux is also available in Flux-Pens® for optimum board cleanliness.

### Cleaning:

Kester 44 possesses excellent fluxing ability, the flux residue is non-corrosive and non-conductive under normal conditions of use. When exposed to an elevated temperature and humidity environment (38°C, 94% RH) for 72 hours, there is no evidence of corrosion caused by the flux residue. Throughout its many years of wide usage, 44 Rosin Flux has produced many billions of soldered connections. In all these billions of solder joints, involving the most delicate and critical of electrical and electronic components, there has never been an authentic instance of corrosion by the flux residue under normal conditions of use. This mild property of the residue permits leaving the flux on the assembly for many 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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