

# 275

## No-Clean Cored Wire

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

#### Product Description

Kester 275 No-Clean Flux for cored solder wire was developed to provide superior wetting performance for hand soldering in the electronics industry. The chemistry is based on some of the same principles that have been safely used for years in mildly activated rosin fluxes. The use of 275 No-Clean Flux results in an extremely clear post-soldering residue without cleaning. The unique chemistry in Kester 275 was also designed to reduce spattering common to most core fluxes. Kester 275 can be used for both lead bearing and lead-free soldering.

#### Performance Characteristics:

- Colorless translucent residues
- Improves wetting performance
- Excellent solderability and fast wetting to a variety of surface finishes
- Eliminates the need and expense of cleaning
- Low smoke and odor
- Low spattering
- Compatible with leaded and lead-free alloys
- Classified as ROL0 per J-STD-004
- Compliant to Bellcore GR-78

#### 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>275</b>
Day 1	$1.6 \times 10^{10} \Omega$	$1.1 \times 10^{10} \Omega$
Day 4	$1.2 \times 10^{10} \Omega$	$9.2 \times 10^9 \Omega$
Day 7	$1.1 \times 10^{10} \Omega$	$8.6 \times 10^9 \Omega$

##### 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> )	
	Sn96.5Ag3.0Cu0.5	Sn63Pb37
285 Mildly Activated Rosin	213 (0.33)	335 (0.52)
245 No-Clean	200 (0.31)	348 (0.54)
275 No-Clean	219 (0.34)	361 (0.56)

## Application Notes

### Availability:

Kester 275 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 also is also included in Kester's product catalog. The amount of flux in the wire dictates the ease of soldering for an application. For tin/lead applications, core 50 or 58 (1.1 and 2.2% flux by weight) are recommended. For Lead-free and high-lead applications, core 58 or 66 (2.2 and 3.3% flux by weight) are recommended. Kester 275 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 275 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 959T no clean, liquid flux may be used as a compatible flux to aid in reworking soldered joints. Kester 959T is also available in Flux-Pens® for optimum board cleanliness.

### Cleaning:

The 275 residues are non-conductive, non-corrosive and do not require removal in most applications. The flux residues are comparable to a conventional RMA except that the 275 residue is clear and colorless.

### 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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