# 245
# No-Clean Cored Wire

## Product Description

Kester 245 No-clean Cored Wire was developed to complement low residue liquid fluxes being used by 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 245 No-clean Cored Wire results in visually accept able assemblies without cleaning, yet soldering quality and efficiency is comparable to that obt ained with mildly activated rosin flux. Kester 245 was formerly classified as Type LR per MIL-F-14256. Kester 245 is Bellcore GR-78 compliant.

**Performance Characteristics:**

- Highly reliable post-soldering residue
- Minimal residue
- 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 Subst ances) 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

| | Blank | 245 |
|---|---|---|
| Day 1 | $1.2 \times 10^{10}\ \Omega$ | $1.7 \times 10^{9}\ \Omega$ |
| Day 4 | $9.4 \times 10^{9}\ \Omega$ | $1.9 \times 10^{9}\ \Omega$ |
| Day 7 | $8.6 \times 10^{9}\ \Omega$ | $2.1 \times 10^{9}\ \Omega$ |

**Spread Test (typical):**
Tested to J-STD-004, IPC-TM-650, Method 2.4.46

| | Area of Spread $mm^2$ ($in^2$) |
|---|---|
| Flux Core Solder | Sn63Pb37 |
| Plastic Rosin Core | 194 (0.30) |
| 285 Mildly Activated Rosin | 335 (0.52) |
| 245 No-Clean | 348 (0.54) |

# Application Notes

## Availability:

Kester 245 is available in a wide variety of alloys, wire diameters and flux percentages. For most applications, Sn63Pb37 is used. Consult the alloy temperature chart in Kester's product cat alog 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 dict ates the ease of soldering for an appli cation. For tin/lead applications, core 50 or 58 (1.1 and 2.2% flux by weight) are recommended.Kester 245 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 245 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 951 or 952-D6 no clean flux may be used as a compatible liquid flux to aid in reworking soldered joints. Kester 951 and 952-D6 are available in Flux-Pens® for optimum board cleanliness.

## Cleaning:

The flux residues left by the 245 core flux 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 it s 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 cont aining > 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.