kester®

Technical Data Sheet

275 Flux-Cored Wire

No-Clean Cored Wire for Lead-free and Leaded Alloys

Product Description

Kester 275 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 results in an extremely clear post-soldering residue without cleaning. The unique chemistry in 275 was also designed to reduce spattering common to most core fluxes. 275 can be used for both lead-free and leaded 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 lead-free and leaded alloys
- Classified as ROL0 per J-STD-004
- Compliant to Bellcore GR-78

RoHS Compliance

This product meets the requirements of the Restriction of Hazardous Substances (RoHS) Directive, 2011/65/EU 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

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

	Area of Spread mm² (in²)	
Flux Cored Solder	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)

Surface Insulation Resistance (SIR), IPC (typical): Pass
Tested to J-STD-004, IPC-TM-650, Method 2.6.3.3
Test Conditions: 85°C, 85% RH, 7 days, 100V

	Blank	245
Day 1	$1.33*10^{10}$ Ω	$2.18*10^{8}$ Ω
Day 4	$8.78*10^{9}$ Ω	$9.55*10^{8}$ Ω
Day 7	$7.53*10^{9}$ Ω	$1.32*10^{9}$ Ω

Surface Insulation Resistivity (SIR) 40C/90%RH, IPC (typical): Pass
Tested to J-STD-004B, IPC-TM-650, Method 2.6.3.7

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Availability

275 is available in a wide variety of alloys, wire diameters and flux percentages. For most applications, Sn63Pb37, Sn96.5Ag3.0Cu0.5 or K100LD is used. Please refer to www.kester.com for wire diameters, flux percentages, alloys and roll sizes that are available.

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 315-343°C (600-650°F) for Sn63Pb37 and Sn62Pb36Ag02 alloys, and between 371-400°C (700-750°F) for lead-free alloys. Heat both the land area and component lead to be soldered with the iron prior to touching the land with the cored wire. Do not apply the wire directly to the soldering iron tip. If needed, Kester 959T or 985M no clean flux may be used as a compatible liquid flux to aid in reworking soldered joints. Kester 959T is available in Flux-Pen® for optimum board cleanliness.

Cleaning

The 275 flux residues are non-corrosive, non-conductive and do not require removal in most applications. 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 no-clean flux is required to clean the residues. Please contact Kester Technical Support for further information.

Storage and Warranty Period

Storage must be in a dry, non-corrosive environment between 10-40°C (50-104°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 limited warranty period determined by the alloy used in the wire. For alloys containing more than 70% lead, the warranty period is 2 years from the date of manufacture. Other alloys have a warranty period 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 (SDS) and warning label before using this product.

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