kester®

Technical Data Sheet

285 Flux-Cored Wire

Mildly Activated Rosin Cored Wire for Leaded 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 QQ-S-571. 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. 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 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

Surface Insulation Resistance (SIR): Pass
Tested to J-STD-004B, IPC-TM-650, Method 2.6.3.7

SIR, IPC (typical): Pass
Tested to J-STD-004, IPC-TM-650, Method 2.6.3.3

	Blank	285
Day 1	$1.0*10^{10}$ Ω	$3.2*10^{9}$ Ω
Day 4	$9.5*10^{9}$ Ω	$7.7*10^{9}$ Ω
Day 7	$8.3*10^{9}$ Ω	$7.0*10^{9}$ Ω

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

	Area of Spread mm² (in²)	
Flux Core Solder	Cu	Ni
285	335 (0.52)	140 (0.22)
282	240 (0.37)	100 (0.16)
44	280 (0.43)	160 (0.25)

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Availability

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 Kester's website for the comprehensive alloy list and for standard wire diameters. The standard wire diameter for most applications is 0.8mm (0.031"). Wire diameters range from 0.25-6.00mm (0.010-0.250in). The amount of flux in the wire dictates the ease of soldering for an application. 285 is packaged on spools of different sizes to accommodate a variety of applications.

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 315-371°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 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 Mildly Activated Rosin Flux is also available as a Flux-Pen® for optimum board cleanliness.

Cleaning

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

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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