

KESTER® 44 FLUX-CORED WIRE

Activated Rosin Cored Wire for Lead-Free and Leaded Alloys

DESCRIPTION

Kester 44 Flux-Cored Wire is an activated rosin formula for use in flux-cored solder wire. 44 has virtually dominated the field of activated rosin core solders for well over five 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. Under IPC J-STD-004, 44 is classified as ROM1. Despite the increased activity and soldering performance, 44 passes both 85 °C/85% RH and 40 °C/90% RH SIR test methods.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

- High activity RA formulation
- Passes both 85 °C/85% RH and 40°C/90% RH IPC SIR testing
- Excellent solderability to a wide range of metallizations
- Industry standard RA cored wire for decades
- Classified as ROM1 per J-STD-004

ROHS COMPLIANCE

MacDermid Alpha does not determine any applicable Restriction of Hazardous Substances (RoHS) exemptions for our lead containing products at the user level. (Applies only if this core flux is combined with a lead-free alloy.)

TECHNICAL DATA

Category	Results	Procedure/Remarks
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

Category	Results	Procedure/Remarks
Silver Chromate	Fail	Tested to J-STD-004, IPC-TM-650, Method 2.6.33
Chloride and Bromides	0.44%	Tested to J-STD-004, IPC-TM-650, Method 2.6.35
Fluorides by Spot Test	Pass	Tested to J-STD-004, IPC-TM-650, Method 2.6.35.1
Surface Insulation Resistivity (SIR),40 °C/90% RH, IPC (Typical)	Pass	Tested to J-STD-004B, IPC-TM-650, Method 2.6.3.7
Surface Insulation Resistivity (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
		Blank44
	Day 1	7.46*10 ⁹ Ω2.2*10 ⁸ Ω
	Day 4	4.9*10 ⁹ Ω2.88*10 ⁹ Ω
	Day 7	7.7*10 ⁹ Ω7.14*10 ⁹ Ω

PROCESSING GUIDELINES

Solder iron tip temperatures are most commonly between 315 to 343 °C (600 to 650 °F) for leaded alloys and 371 to 400 °C (700 to 750 °F) for lead-free alloys. Heat both the land area and component lead to be soldered with the iron tip prior to applying the solder wire to land area or component lead. Do not apply the wire directly to the soldering iron tip; doing so will shorten the life of the soldering tip.

Additional liquid flux should only be used as a last resort. Any flux applied to the solder location should be kept to the area of the connection being reworked. If needed, Kester 186 or Kester NF372-TB may be used as a compatible liquid fluxes to aid in reworking soldered joints. Kester 186 and Kester NF372-TB are also available in Flux-Pens® for optimum board cleanliness.

Cleaning

44 possesses excellent fluxing ability; the flux residues are non-corrosive, non-conductive and do not require removal for most applications under normal conditions of use. IPA will not clean the residues off the surface of the circuit board after the soldering process. If removal is required, a saponifier or cleaning agent specifically designed to clean a no-clean flux is required to clean the residues. Please contact MacDermid Alpha Technical Support for further information.

Storage, Handling and Shelf Life

Storage must be in a dry, non-corrosive environment between 10 to 40 °C (50 to 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 shelf life determined by the alloy used in the wire. For alloys containing more than 70% lead, the shelf life is 2 years from the date of manufacture. Other alloys have a shelf life of 3 years from the date of manufacture.

AVAILABILITY

44 is available in a wide variety of alloys, wire diameters, flux percentages and roll sizes in both leaded and lead-free alloys. The most common alloys are Sn63Pb37 and Sn60Pb40.

Note: Core size 50, 58 and 66 = 1.1%, 2.2% and 3.3% flux core, respectively.

RECYCLING SERVICES

We provide safe and efficient recycling services to help companies meet their environmental and legislative requirements and at the same time, maximize the value of their waste streams.

Our service collects solder dross, solder scrap, and various forms of solder paste waste. Please contact your local sales representative for recycling capabilities in your area.



SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

CONTACT INFORMATION

www.macdermidalpha.com

North America 140 Centennial Avenue Piscataway, NJ 08854 1.800.367.5460	Europe Unit 2, Genesis Business Park Albert Drive Woking, Surrey, GU21 5RW, UK 44.01483.758400	Asia 8/F., Two Sky Parc 51 Hung To Road Kwun Tong, Kowloon, Hong Kong, SAR China 852.2500.5365
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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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