kester®

Technical Data Sheet

245S Preforms

No-Clean Internally Fluxed Preforms for Lead-Free and Leaded Alloys

Product Description

Kester 245S 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 245S results in visually acceptable assemblies without cleaning, yet soldering quality and efficiency is comparable to that obtained with mildly activated rosin flux. Under IPC J-STD-004, 245S is classified as ROL0; 245S was formerly classified as Type LR per MIL-F-14256. 245S is sufficiently active to survive convection heating profiles when preforms are used in SMT processes.

Performance Characteristics:

- Highly reliable post-soldering residue
- Minimal residue
- Compatible with leaded and lead-free alloys
- Classified as ROL0 per J-STD-004
- Passes both 85°C/85% RH and 40°C/90% RH IPC SIR testing

RoHS Compliance

Kester 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)

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

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

	Blank	245S
Day 1	$7.46*10^9$ Ω	$1.39*10^9$ Ω
Day 4	$4.90*10^9$ Ω	$3.07*10^9$ Ω
Day 7	$7.70*10^9$ Ω	$8.04*10^9$ Ω

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Availability

245S cored preforms are available in a wide variety of alloys, sizes, and flux percentages in both leaded and lead free alloys. Please refer to www.kester.com for more information on Kester preform capabilities.

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

Process Considerations

245S solder preforms can be reflowed by a variety of methods including hot bar, hot air, laser, induction, convection reflow and solder iron. The 245S has sufficient activity to survive reflow profiles when used in conjunction with standard SMT assembly. Solder iron or hot bar temperatures are most commonly between 315-343°C (600-650°F) for leaded alloys and 371-400°C (700-750°F) for lead-free alloys.

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 flux to aid in reworking soldered joints. Kester 186 and Kester NF372-TB are also available in Flux-Pens® for optimum board cleanliness.

Cleaning

245S 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 Kester Technical Support for further information.

Storage and Warranty Period

Storage must be in a dry, non-corrosive environment between 10-40°C (50-140°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 preforms have a limited warranty period determined by the alloy used in the preforms. 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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