

435 Preforms

Organic Water Soluble Flux Coating for Preforms

Product Description

Kester 435 is an organic, high activity, acid flux. 435 is heat stable, exhibits excellent wetting capabilities and has less odor than most competitive internal water soluble based products. The residues left by 435 are near neutral pH and therefore also less corrosive. 435 is suited for use in a wide variety of preform applications.

Performance Characteristics:

- Highest activity for soldering most metals
- Compatible with leaded and lead- free alloys
- Easily cleaned in warm water
- Low voiding and outgassing
- Classified as ORH1 per J-STD-004

RoHS Compliance

Kester does not determine any applicable Restriction of Hazardous Substances (RoHS) exemptions for our lead containing products at the user level.

Reliability Properties

Copper Mirror Corrosion: High

Tested to J-STD-004, IPC-TM-650, Method 2.3.32

Corrosion Test: High

Tested to J-STD-004, IPC-TM-650, Method 2.6.15

Silver Chromate: Fail

Tested to J-STD-004, IPC-TM-650, Method 2.3.33

Chloride and Bromides: 0.7%

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-004, IPC-TM-650, Method 2.6.3.3

	Blank	435 (Cleaned)
Day 1	9.7*10 ⁹ Ω	1.4*10 ⁹ Ω
Day 4	8.3*10 ⁹ Ω	1.4*10 ⁹ Ω
Day 7	7.6*10 ⁹ Ω	1.2*10 ⁹ Ω

Availability

Kester Preforms are available in a wide variety of shapes, sizes and alloys and are offered with and without flux. Preforms can be coated in a variety of weight percents with typical flux ranges available from 0.75 to 2.5% by weight. Consult the alloy temperature chart on Kester's website for a comprehensive alloy list. The amount of flux on the preform dictates the ease of soldering for an application. Preforms are typically packaged in bulk containers but can be placed in specialty packaging to accommodate a variety of applications.

Process Considerations

Preforms are placed into position between the surfaces to be soldered. The preform area can then be heated locally with a soldering iron, torch, hot air tool or the whole assembly passed through a suitable oven. The assembly should be heated above the liquidus temperature of the solder alloy being used. Optimum temperatures and times for reflow and intermetallic formation are dependent on assembly, process and alloy used. Preforms allow manufacturing soldering operations to be accomplished without the use of additional liquid fluxing agents. This reduces throughput time and increases process yield by delivering precisely the right amount of flux to solder surfaces together. After soldering has been completed, the flux residues can be left on the assembly without affecting reliability of the product.

Cleaning

The 435 flux residue is conductive and will cause corrosion of metal parts over time. Residue removal should be completed within 48 hours. 435 Organic Flux has the advantage over many competitive water soluble flux formulations in that the residue is easily and completely removed with plain hot water (40 to 60 °C/120 to 140 °F). Softened tap water or deionized water is recommended for high reliability. Use of hard or high mineral content tap water will increase ionic cleanliness measurement levels.

Storage, Handling and Shelf Life

Storage must be in a dry, non-corrosive environment between 10 to 40 °C (50 to 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 coated preforms have a shelf life determined by the alloy used in the preforms. 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.

Health and Safety

This product, during handling or use, may be hazardous to your health or the environment. Read the Safety Data Sheet and warning label before using this product. Safety Data Sheets are available at <https://www.kester.com/downloads/sds>.

Contact Information

To confirm this document is the most recent version, please contact Assembly@MacDermidAlpha.com

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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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