

1589 Soldering Flux

Activated Rosin Liquid Flux

Product Description

Kester 1589 Soldering Flux is a homogeneous solution of high quality, purified Grade WW rosin blended into an alcohol solvent system. A very effective activating agent has been added to provide superior fluxing ability. A very dilute formulation for applications where an absolute minimum of flux residue is desirable but high activity is required. 1589 has been developed for fluxing applications where non-activated and mildly activated rosin fluxes are too inactive to remove metal oxides, where proper and complete residue removal of potentially corrosive water soluble organic acid flux is not possible, and where soldering of electronic assemblies requires instant wetting and excellent capillary flow. 1589 can be used for solder coating or tinning bare leads.

Performance Characteristics:

- High thermal stability
- Improves soldering performance
- Classified as ROM1 per J-STD-004

RoHS Compliance

This product meets the requirements of the Restriction of Hazardous Substances (RoHS) Directive, 2015/863 for the stated banned substances.

Physical Properties

Specific Gravity: 0.837

Anton Paar DMA @ 25°C

Percent Solids (typical): 16%

Tested to J-STD-004, IPC-TM-650, Method 2.3.34

Flash Point: 18 °C (64 °F)

Reliability Properties

Copper Mirror Corrosion: Moderate

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: Fail

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

Chloride and Bromides: 0.44%

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

Flux Application

1589 Activated Rosin Flux can be applied by brush, dip, or wave processes.

Process Considerations

The optimum preheat temperature for most circuit assemblies is 90 to 105 °C (194 to 221 °F) as measured on the top or component side of the printed circuit board. Dwell time in the wave is typically 2 to 4 seconds. The wave soldering speed should be adjusted to accomplish proper preheating and evaporate excess solvent, which could cause spattering. For best results, speeds of 1.1 to 1.8 m/min (3½-6 ft/min) are used. The surface tension has been adjusted to help the flux form a thin film on the board surface allowing rapid solvent evaporation.

Flux Control

Specific gravity is normally the most reliable method to control the flux concentration of rosin-based fluxes. To check concentration, a hydrometer should be used. Kester 104 Thinner is an appropriate solvent for diluting this activated rosin flux to the desired solids content and viscosity, and for restoring solvent loss through evaporation.

Cleaning

1589 flux residues are non-conductive, non-corrosive and do not require removal in most applications. If residue removal is required, call Kester Technical Support.

Storage, Handling and Shelf Life

1589 is flammable. Store away from sources of ignition. Shelf life is 2 years from date of manufacture when handled properly and held at 10 to 25 °C (50 to 77 °F).

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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