

1544 Soldering Flux

Activated Rosin Liquid Flux

Product Description

Kester 1544 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. 1544 is a liquid equivalent of Kester 44 Activated Rosin Core Solder. The desired flux activity and the amount of rosin residue are determined by the concentration (solids percentage) of the flux. 1544 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. 1544 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. Additional RoHS information is located at <https://www.kester.com/downloads/environmental>.

Physical Properties

Specific Gravity: 0.917 to 0.928

Anton Paar DMA @ 25 °C

Percent Solids (typical): 50%

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

Flash Point: 18 °C (64 °F)

VOC Content (g/liter): 459

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

1544 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 for leaded soldering process and 4 to 8 seconds for a lead-free process. The wave soldering speed should be adjusted to accomplish the proper solder contact range. The next step will be to adjust the temperature settings for the preheat section to achieve the proper preheat temperatures range as measured on the topside of the circuit board.

Flux Control

Specific gravity is normally the most reliable method to control the flux concentration of high solids 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. The correct specific gravity range for 1544 is 0.917 to 0.928 (Anton Paar DMA @ 25 °C).

Cleaning

1544 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

1544 is flammable. Store away from sources of ignition. Shelf life is 2 years from the 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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