



kester®

Technical Data Sheet

1544 Soldering Flux

Activated Rosin Liquid Flux



Product Description

Kester 1544 Activated Rosin Liquid 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, 2015/863 for the stated banned substances.



Physical Properties

Specific Gravity: 0.917-0.928
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)



Reliability Properties

Copper Mirror Corrosion: Moderate
Tested to J-STD-004, IPC-TM-650, Method 2.3.32

Silver Chromate: Fail
Tested to J-STD-004, IPC-TM-650, Method 2.3.33

Fluorides by Spot Test: Pass
Tested to J-STD-004, IPC-TM-650, Method 2.3.35.1

Corrosion Test: Low
Tested to J-STD-004, IPC-TM-650, Method 2.6.15

Chloride and Bromides: 0.44%
Tested to J-STD-004, IPC-TM-650, Method 2.3.35

Flux Application

1544 can be applied by brush, dip or wave processes.

Process Considerations

The optimum preheat temperature for most circuit assemblies is 90-105°C (194-221°F) as measured on the top or component side of the printed circuit board. Dwell time in the wave is typically 2-4 seconds for leaded soldering process and 4-8 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 0.917-0.928 (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 10-25°C (50-77°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.