kester® Technical Data Sheet

TSF-6592LV
No-Clean Tacky Soldering Flux

Product Description

Kester TSF-6592LV is a no-clean paste flux designed as a lead-free solution for an array of lead-free interconnect applications such as flip chip attach, sphere or ball attach, rework/repair of CSPs, BGAs, SMDs, or any lead-free soldering application that requires a very tacky flux. It has been optimized for consistent high speed printing applications.

Performance Characteristics:

- Compatible with Lead Free alloys such as SnAg, SnCu, SnAgCu, SnAgBi
- Reflowable with peak temperatures up to 270°C
- Reflowable in air and nitrogen
- Low voiding
- Bright shiny soldered joints with clear residues
- Aggressive flux on various substrates such as OSP-Cu, Immersion finishes and ENIG
- Clear non-tacky residues
- Compliant to Bellcore GR-78
- High tack to minimize skewing of components
- Stencil life of 8+ hours (process dependent)
- Classified as ROL0 per J-STD-004A & J-STD-004B

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

Viscosity (typical): 235 poise
Malcom Viscometer @ 10rpm and 25°C

Initial Tackiness (typical): 100 grams
Tested to J-STD-005, IPC-TM-650, Method 2.4.44

Acid Number: 85 mg KOH/g of flux
Tested to J-STD-004, IPC-TM-650, Method 2.3.13

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

Chloride and Bromides: None Detected
Tested to J-STD-004, IPC-TM-650, Method 2.3.35

Silver Chromate: Pass
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

Electrochemical Migration (ECM): Pass
J-STD-004B, IPC-TM-650, Method 2.6.14.1

Surface Insulation Resistivity (SIR): Pass
J-STD-004B, IPC-TM-650, Method 2.6.3.7

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

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Standard Applications

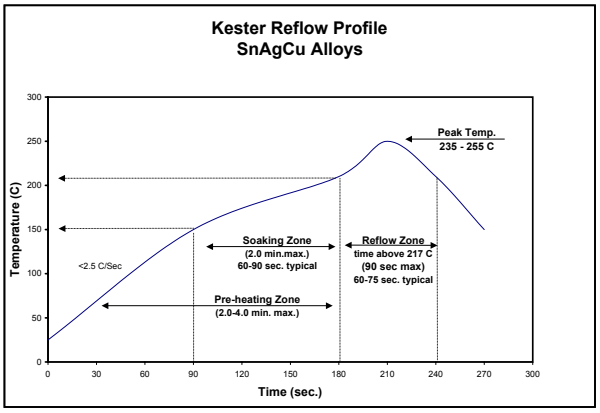
TSF-6592LV is designed for stencil/screen printing, rotating drum, slide fluxers and/or syringe applications. Great for rework applications on all PCB packages of various electronic devices. TSF-6592LV is great for rework applications on all PCB packages. TSF-6592LV can be used in BGA/PGA sphere/pin attachment vehicle or for repair and reballing/repinning. This flux works on flip chip, chip scale package and flip chip bumping sites assemblies as a soldering paste flux.

Printing Parameters

Temperature/Humidity	Optimal ranges are 21-25°C (70-77°F) and 35-65% RH

Recommended Reflow Profile

The recommended convection reflow profile for TSF-6592LV for Sn96.5Ag3.5, Sn99.3Cu0.7, or the various SnAgCu alloys is shown here. This profile is simply a guideline. As TSF-6592LV was engineered to be a versatile, robust interconnect material other reflow profiles would be effective. Your optimal profile may be different from the one shown based on your oven, component design, fixturing and mix of defects. Please contact Kester Technical Support if you need additional profiling advice.



Cleaning

TSF-6592LV is a no-clean chemistry. The residues do not need to be removed for typical applications. If residue removal is required, it can be removed using commercially available flux residue cleaner. Contact Kester Technical Support for additional assistance.

Storage, Handling and Shelf Life

Refrigeration is the recommended optimum storage condition for TSF-6592LV to maintain consistent viscosity, reflow characteristics and overall performance. TSF-6592LV should be stabilized at room temperature prior to printing. TSF-6592LV should be kept at standard refrigeration conditions, 0-10°C (32-50°F). Please contact Kester if you require additional advice with regard storage and handling of this material. Shelf life is 4 months from date of manufacture when handled properly and held at 0-10°C (32-50°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.

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