



TSF-6522RH

No-Clean Tacky Soldering Flux

Kester's TSF-6522RH is a rosin based no-clean tacky soldering flux formula designed to be compliant with IEC 61249-2-21 definition for halide free materials.

TSF-6522RH is a formula being marketed for customers familiar with Kester's TSF 6522 formula, but now must comply with new halide free legislation.

TSF-6522RH can be used with doctor blade, or a drum fluxer. Kester's TSF-6522RH can also be used in dot dispensing for BGA/PGA sites or in a rework application for surface mount packages.

Performance Characteristics:

- High tack values and long tack life
- Leaves bright/shiny solder joints after reflow
- Can reflow in air or nitrogen environments

RoHS Compliance

This product meets all the requirements of the RoHS (Restriction of Hazardous Substances) Directive, 2002/95/EC Article 4 for the stated banned substances.

Physical Properties (typical)

Viscosity Range: 240 +/-75 poise
Kester Method #1W-QC-3-09

Tackiness (grams-force): 96 +/- 38 gF
Kester Method #1W-QC-3-04

Acid Number: 76 +/- 5 mg KOH / gm
Kester Method #1W-QC-G-01

Color: Amber
Kester Method #1W-QC-G-18

Halogens: 650 ppm theoretical in the flux

Reliability Properties (typical)

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

Qualitative Halide Tests:

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

Typical S.I.R., IPC: Pass
Tested to J-STD-004, IPC-TM-650, Method 2.6.3.3, (B-24 coupon)

Blank at 24 hours: 1.26E+10
Blank at 96 hours: 1.47E+09
Blank at 168 hours: 7.88E+09

Uncleaned at 24 hours: 3.16E+08
Uncleaned at 96 hours: 1.84E+08
Uncleaned at 168 hours: 5.20E+08

Standard Applications:

Tacky solder flux formulations are designed for stencil/screen printing, pin transfer, dot dispensing and/or syringe applications. TSF 6522RH can be used in BGA/PGA or CSP sphere/pin attachment process. TSF 6522RH can also be used for chip attach. If residue removal is desired it can be accomplished with solvent or semi-aqueous cleaning strategies. Misprinted substrates, components, stencils, and production tools can be cleaned using isopropanol. Although TSF 6522RH was designed for use with lead-free alloys, it also works well as a flux with eutectic Sn63/Pb37 solder.

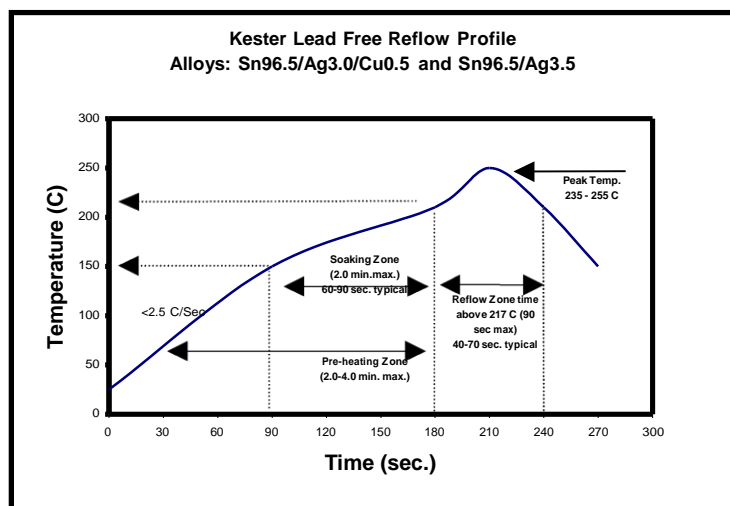
Printing Parameters:

Temperature/Humidity -- Optimal ranges for production are 21-25°C (70-77°F) and 35-65% R.H.

Activation Parameters:

Temperature -- Optimal activation temperatures are 150°-210°C (302-410°F). See "Soaking Zone" in diagrams below.

Reflow Profile:



Cleaning:

TSF 6522RH is a no-clean formulas. The residues do not need to be removed for typical sphere attach applications. If TSF 6522RH is used in a chip attach application where a subsequent underfill will be used, better reliability will be achieved if the residues are removed. If residue removal is required, contact Kester Technical Support.

Storage, Handling, and Shelf Life:

Storage & Handling -- should be kept at standard refrigeration temperatures and humidity conditions, 0-10°C (32-50°F) and 35-55% R.H. respectively. Shelf life is 3 months from date of manufacture when held at 0-10°C (32-50°F).

Health & Safety:

This product, during handling or use, may be hazardous to health or the environment. Read the Material Safety Data Sheet and warning label before using this product.

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The data recommendations presented are based on tests, which we consider reliable. Because Kester has no control over the conditions of use, we disclaim any responsibility connected with the use of any of our products or the information presented. We advise that all chemical products be used only by or under the direction of technically qualified personnel who are aware of the potential hazards involved and the necessity for reasonable care in their handling. The technical information contained herein is consistent with the properties of this material but should not be used in the preparation of specifications as it is intended for reference only. For assistance in preparing specifications, please contact your local Kester office for details.