

## TSF-6852

### Synthetic Water-Soluble Tacky Soldering Flux

#### DESCRIPTION

Kester **TSF-6852** is a synthetic water-soluble tacky soldering flux. The synthetic ingredients eliminate naturally occurring raw materials typically found in fluxes. This maximizes lot-to-lot consistency. TSF-6852 is room temperature stable and does not require refrigeration for long term storage.

**TSF-6852** has been formulated to be a drop in replacement for a variety of metallurgies. These include low melting point alloys (SnBi, SnBiAg, etc.), typical tin-lead eutectic and the higher melting point, lead-free alloys (SnAg, SnCu, SnAgCu, SnSb, etc.). Post reflow, the residues are completely soluble in water and do not require any cleaning additives. To reduce the cost of assembling, room temperature or cool water (<65°C) can be used to remove **TSF-6852** residues.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

#### FEATURES & BENEFITS

- 8 hour stencil life (process dependent)
- Room temperature long term storage
- Residue removal by water (<65 °C)
- Synthetic raw materials for maximum lot-to-lot consistency
- Leaves bright/shiny solder joints after reflow
- Can reflow in air or nitrogen environments
- Classified as ORH1 per J-STD-004

#### RoHS COMPLIANCE

This product meets the requirements of the Restriction of Hazardous Substances (RoHS) Directive, 2011/65/EU for the stated banned substances.

**PHYSICAL PROPERTIES**

**Viscosity (typical):** 220 poise  
 Malcom Viscometer @ 10rpm and 25 °C

**Initial Tackiness (typical):** 61 grams  
 Tested to J-STD-005, IPC-TM-650, Method 2.4.44

**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

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

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

**SIR, IPC (typical):** Pass  
 Tested to J-STD-004, IPC-TM-650, Method 2.6.3.3

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

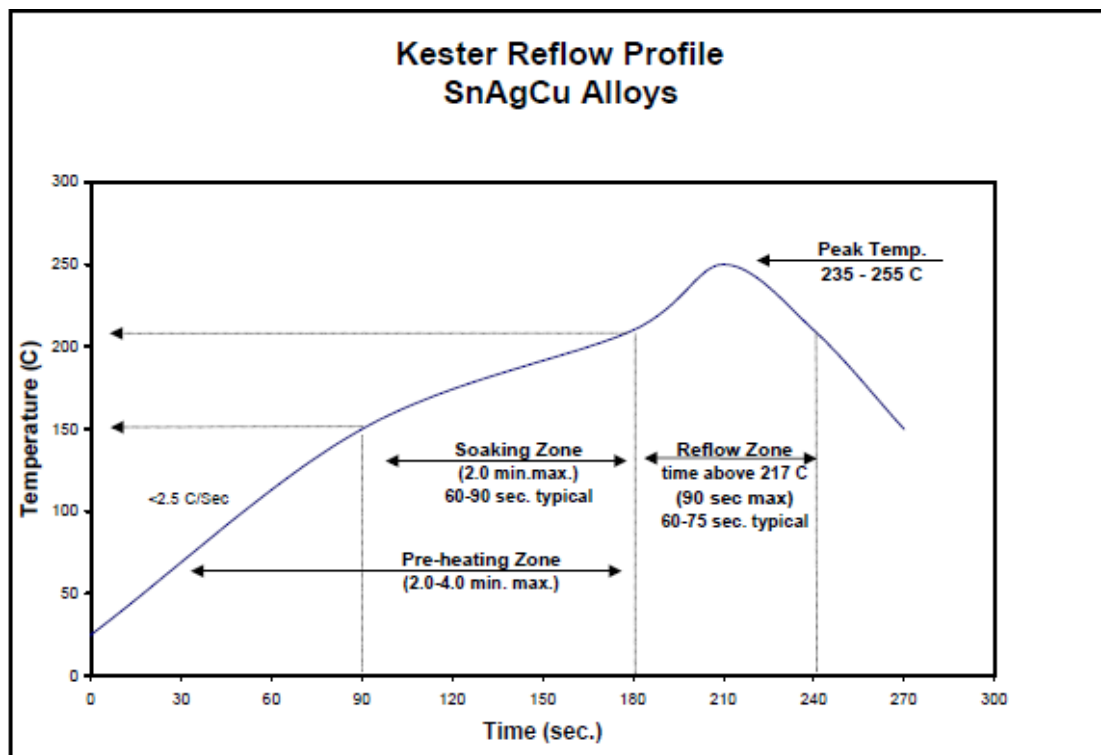
	Blank	TSF-6852
Day 1	3.1*10 <sup>14</sup> Ω	4.1*10 <sup>14</sup> Ω
Day 4	6.3*10 <sup>14</sup> Ω	4.6*10 <sup>14</sup> Ω
Day 7	6.6*10 <sup>10</sup> Ω	3.4*10 <sup>14</sup> Ω

**STANDARD APPLICATIONS**

TSF-6852 is designed for stencil/screen printing, pin transfer, dot dispensing and/or syringe applications. Tacky solder flux formulations can be used as a tack and flux vehicle for soldering components to a solid solder deposit (SSD), or precision pad technology (PPT) board surfaces. Great for rework applications on all PCB packages. Can be used in BGA/PGA sphere/pin attachment vehicle or for repair and reballing/repinning.

**RECOMMENDED REFLOW PROFILE**

The recommended convection reflow profile for Sn96.5Ag3.5, Sn99.3Cu0.7, or the various SnAgCu alloys is shown here. This profile is simply a guideline. As TSF-6852 was engineered to be a versatile, robust interconnect material other reflow profiles will be effective. The optimal profile for a process may be different from the one shown based on oven type, component design, fixturing and mix of defects. Please contact Kester Technical Support if additional profiling advice is needed. TSF-6852 will facilitate excellent wetting in an air reflow environment and can also be used in an inert(nitrogen) environment.


**CLEANING**

TSF-6852 residues are best removed using automated cleaning equipment (in-line or batch). A de-ionized water final rinse is recommended. Water temperatures should be 38 to 65 °C (100 to 150 °F), with water pressure of 45 to 65 psi. For best results, flux residues should be removed as soon as possible, preferably within 4 hours after soldering. Assemblies should be checked for ionic cleanliness levels to maintain the highest standards possible. IPC J-STD-001 specifies a maximum of 1.56 micrograms/cm<sup>2</sup> NaCl equivalent when tested in accordance with IPC-TM-650, Test Method 2.3.25 or 2.3.26.

**SAFETY & WARNING**

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

**STORAGE**

TSF-6852 can be stored at room temperature, <25 °C (<77 °F) or refrigerated. If stored refrigerated, TSF-6852 should be kept at standard refrigeration conditions, 0 to 10 °C (32 to 50 °F). TSF-6852 should be stabilized at room temperature prior to printing. Please contact Kester Technical Support if you require additional advice with regard to storage and handling of this material. Shelf life is 4 months from the date of manufacture when stored at room temperature and handled properly.

**CONTACT INFORMATION**

To confirm this document is the most recent version, please contact  
**techinfo@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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