



# TSF-6516

## No-Clean Tacky Soldering Flux

### Product Description

Kester TSF-6516 is a no-clean tacky soldering flux formula that possesses a high activity level, allowing it to solder nickel surfaces. The robust wetting action of Kester TSF-6516 will allow OSP treated copper, as well as heavily oxidized copper, surfaces to exhibit good soldering properties, even after 2 or 3 thermal cycles. Following reflow, Kester TSF-6516 will leave aesthetically pleasing clear residues on the assembly. Kester TSF-6516 is designed for a wide range of temperature and humidity conditions.

#### Performance Characteristics:

- Stencil life: 8 hours (process dependent)
- Excellent printing characteristics to <16mil pitch
- Leaves bright/shiny solder joints after reflow
- Can reflow in air or nitrogen environments
- Classified as ROL0 per J-STD-004
- Compliant to Belcore GR-78

### Physical Properties

**Viscosity (typical):** 180 poise

Malcom Viscometer @ 10rpm and 25°C

**Initial Tackiness (typical):** 125 grams

Tested to J-STD-005, IPC-TM-650, Method 2.4.44

**Acid Number:** 75.0 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

**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

**Fluorides by Spot Test:** Pass

Tested to J-STD-004, IPC-TM-650, Method 2.3.35.1

**SIR, IPC (typical):** Pass

Tested to J-STD-004, IPC-TM-650, Method 2.6.3.3

	<b>Blank</b>	<b>TSF-6516</b>
Day 1	$6.9 \times 10^{10} \Omega$	$4.0 \times 10^8 \Omega$
Day 4	$4.0 \times 10^{10} \Omega$	$4.9 \times 10^8 \Omega$
Day 7	$3.6 \times 10^{10} \Omega$	$1.0 \times 10^9 \Omega$

## Application Notes

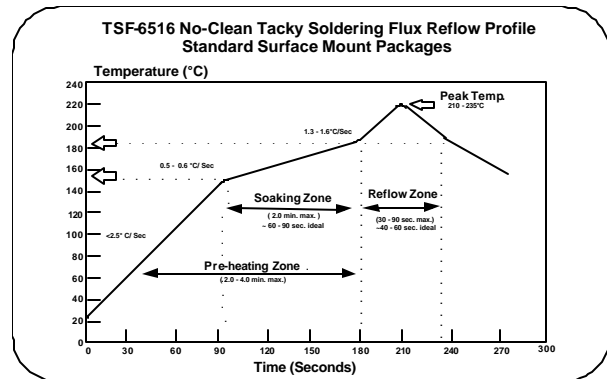
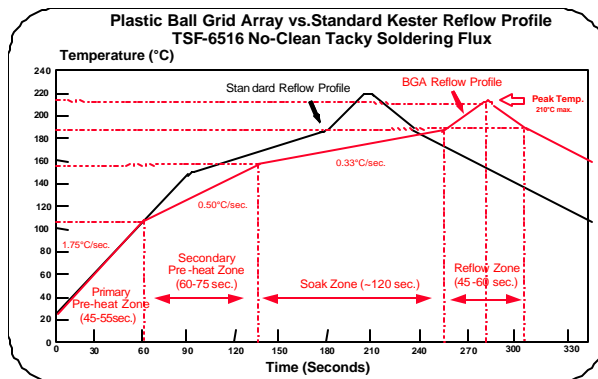
### Standard Applications:

TSF-6516 was designed for stencil/screen printing, pin transfer, dot dispensing and/or syringe applications. This flux 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. TSF-6516 is great for rework applications on all PCB packages. TSF-6516 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 flux.

### Printing Parameters:

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

### Recommended Reflow Profiles:



### Cleaning:

TSF-6516 is a no-clean chemistry. The residues do not need to be removed for typical applications. If residue removal is required, call Kester Technical Support.

### Storage, Handling, and Shelf Life:

Refrigeration is the recommended optimum storage condition for TSF-6516 to maintain consistent viscosity, reflow characteristics and overall performance. TSF-6516 should be stabilized at room temperature prior to printing. TSF-6516 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 6 months from date of manufacture when handled properly and 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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