kester® Technical Data Sheet

SE-CURE™ 9650D
Flip Chip Attach Liquid Flux

Product Description

Kester SE-CURE™ 9650D is an ultra low residue, no-clean liquid flux designed to be compatible with standard underfill materials. The SE-CURE™ 9650D is an engineered product that eliminates the need to clean flip chip assemblies prior to underfill operations. This flux residue-to-underfill compatibility increases the overall adhesion of the polymer underfill system resulting in improved component integrity.

Performance Characteristics:

- Little to no residue after reflow
- Wide processing window
- Classified as ORL0 per J-STD-004
- Compliant to Bellcore GR-78

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

Specific Gravity: 0.790
Anton-Paar DMA 35 @ 25°C

Viscosity, Kinematic (typical): 2.74
1W-RD-G-17

Acid Number: 8
Tested to J-STD-004B, IPC-TM-650, Method 2.3.13

Quantitative Halides: None

Color: Clear, Colorless
Visual

Reliability Properties

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

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

Chloride and Bromides: None detected
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

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

	Blank	SE-CURE™ 9650D
Day 1	$4.1*10^{10}$ Ω	$4.5*10^{10}$ Ω
Day 4	$2.1*10^{10}$ Ω	$2.2*10^{10}$ Ω
Day 7	$1.8*10^{10}$ Ω	$1.9*10^{10}$ Ω

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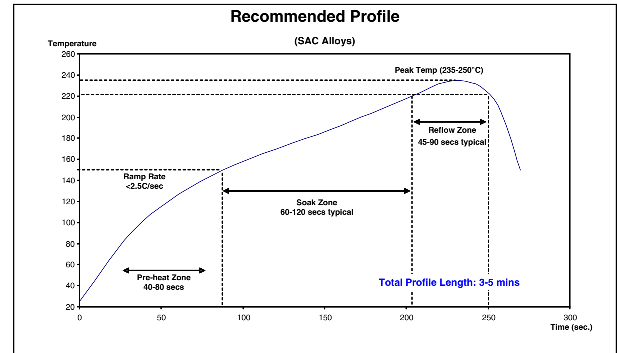
Standard Applications

The SE-CURE™ 9650D is applied to the substrate by either a spray fluxing applicator or by jet dispensing. Flip chips are then placed onto the printed wiring substrates for the soldering operation.

Recommended Reflow Profile

Suggested reflow schedules are general guidelines for optimum properties of the 9650D. The 9650D is capable of being processed concurrently with normal surface mount components. Other reflow schedules are possible and may yield satisfactory results. Soldering occurs during a normal surface mount reflow process in nitrogen (< 700 ppm O2).



Cleaning

SE-CURE™ 9650D is a no-clean formula. The ultra-low residues do not need to be removed for flip chip applications. Although SE-CURE™9650D is designed for no-clean applications, its residues can be easily removed using automated cleaning equipment (in-line or batch) with the aid of a solvent system (isopropanol, acetone, etc.). Equipment, mis-jetted or sprayed substrates, and rework sights can be cleaned using a solvent system (isopropanol, acetone, etc.)

Storage, Handling and Shelf Life

The recommended storage condition to maintain consistent viscosity, flux characteristics and overall performance is a temperature of 22-25°C (72-77°F). Shelf life is 12 months from date of manufacture when handled properly and held at 22-25°C (72-77°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.

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