

FL250CR Solder Paste

No-Clean



Product Description

Kester FL250CR is a no-clean solder paste that is air or nitrogen processable, with good print definition and increased throughput. Its flux system is specially formulated to ensure better slump resistance during printing and preheating. Kester FL250CR offers excellent wetting characteristics and good fillet formation in normal air reflow. The residue is non-tacky, optically clear and inert, and is classified as Type ROL0 under IPC ANSI/J-STD-004 Joint Industry Standard.

Performance Characteristics:

- Excellent printing characteristics to 0.4mm (16 mil) pitch
- Leaves bright/shiny solder joints after reflow
- Scrap is reduced due to less paste dry out
- Anti-slumping to eliminate bridging
- Can reflow in air or nitrogen
- Excellent cosmetic appearance with its clear, colorless residue
- Classified as ROL0 per J-STD-004
- Compliant to Bellcore GR-78-CORE



RoHS Compliance

This product meets the requirements of the Restriction of Hazardous Substances (RoHS) Directive, 2015/863 for the stated banned substances.



Physical Properties

Viscosity (typical): 1850 poise
Malcom Viscometer PCU-203 @ 10 rpm, 25°C, measurement after 9 minutes

Slump Test: Pass
Tested to J-STD-005, IPC-TM-650, Method 2.4.35

Wetting Test: Pass
Tested to J-STD-005, IPC-TM-650, Method 2.4.45

Initial Tackiness (typical): 27 grams
Tested to J-STD-005, IPC-TM-650, Method 2.4.44

Solder Ball Test: Preferred
Tested to J-STD-005, IPC-TM-650, Method 2.4.43



Reliability Properties

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

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

Electromigration, Bellcore (typical): Pass
Tested to Bellcore GR-78-CORE

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

	Blank	FL250CR
Day 1 (24 h)	2.6 x 10 ¹⁰ Ω	3.1 x 10 ¹⁰ Ω
Day 4 (96 h)	2.9 x 10 ¹⁰ Ω	3.9 x 10 ¹⁰ Ω
Day 7(168 h)	2.8 x 10 ¹⁰ Ω	3.5 x 10 ¹⁰ Ω

	Blank	FL250CR
Initial (0h)	7.8 x 10 ¹¹ Ω	5.8 x 10 ¹⁰ Ω
Day 21 (500h)	8.2 x 10 ¹¹ Ω	2.7 x 10 ¹⁰ Ω

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

S.I.R., Bellcore (typical): Pass
Tested to Bellcore GR-78-CORE

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

	Blank	FL250CR
Day 1 (24 h)	9.4 x 10 ¹¹ Ω	6.3 x 10 ¹⁰ Ω
Day 4 (96 h)	3.5 x 10 ¹¹ Ω	8.9 x 10 ¹⁰ Ω

Standard Applications:
Stencil Printing: 90% Metal

✓ Availability

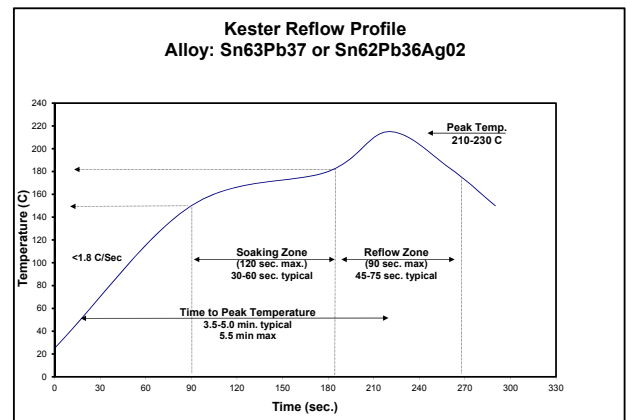
FL250CR is commonly available in the Sn63Pb37, Sn62Pb36Ag02 and Ag0.4Sn62.8Pb36.8 alloys. Type 3 powder mesh is recommended, but different powder particle size distributions are available for standard and fine pitch applications. For specific packaging information, see Kester's Solder Paste Chart for available sizes. The appropriate combination depends on process variables and the specific application.

♻️ Printing Parameters

Squeegee Blade	80 to 90 durometer polyurethane or stainless steel
Squeegee Speed	25-100 mm/sec (1-4 in/sec) recommended
Stencil Material	Stainless Steel, Molybdenum, Nickel Plated, Brass
Separation Speed	2-10mm/sec
Temperature / Humidity	Optimal ranges are 21-25°C (70-77°F) and 35-65% RH

♻️ Recommended Reflow Profile

The recommended convection reflow profile for FL250CR formula made with either the Sn63Pb37 or Sn62Pb36Ag02 is shown here. This profile is simply a guideline. Since FL250CR is a highly active solder paste, it can solder effectively over a range of profiles. Your optimal profile may be different from the one shown based on your oven, board and mix of defects. Please contact Kester if you need additional profiling advice.



• Cleaning

FL250CR is a no-clean formula. The residues do not need to be removed for typical applications. Although FL250CR is designed for no-clean applications, its residues can be easily removed using automated cleaning equipment (in-line or batch) with a variety of readily available cleaning agents. Call Kester Technical Support for details.

📦 Storage, Handling and Shelf Life

Refrigeration is the recommended optimum storage condition for solder paste to maintain consistent viscosity, reflow characteristics and overall performance. FL250CR should be stabilized at room temperature prior to printing. FL250CR 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.