

Easy Profile[®] 256HA No-Clean Solderpaste

Product Description

Easy Profile[®] 256HA is a no-clean, air or nitrogen reflowable solder paste specifically designed to provide maximum print characteristics and solderability. EP256HA has been designed for applications that require the ultimate activity with respect to difficult to solder to components and board surface metallizations. EP256HA is also capable of stencil printing after downtimes of up to 90 minutes with an effective first print down to 20 mils. EP256HA is a solder paste formula that maintains its activity and printing characteristics for up to 8 hours without any shear thinning.

- Excellent solderability on difficult to solder to components, i.e., PdAg
- High activity on all substrates, including OSPs
- Excellent printing characteristics to 0.4mm (16 mil) pitch with Type 3 powder
- Capable of 90 minute break times in printing
- High print speeds to 150 mm/sec (6 in/sec)
- Stencil life: 8+ hours (process dependent)
- Scrap is reduced due to less paste dry out
- Stable tack: 8+ hours
- Classified as ROL0 per J-STD-004
- Compatible with enclosed print head systems

Standard Applications

90% Metal - Stencil Printing

90% Metal - Enclosed Head Printing

Physical Properties

(Data given for Sn63Pb37 90% metal, -325+500 mesh)

Viscosity (typical): 1800 poise

Malcom Viscometer @ 10rpm and 25°C

Initial Tackiness (typical): 37 grams

Tested to Kester Method 1W-QC-3-04

Slump Test: Pass

Tested to J-STD-005, IPC-TM-650, Method 2.4.35

Solder Ball Test: Pass

Tested to J-STD-005, IPC-TM-650, Method 2.4.43

Wetting Test: Pass

Tested to J-STD-005, IPC-TM-650, Method 2.4.45

Reliability Properties

Copper Mirror Corrosion: Low

Tested to J-STD-004, IPC-TM-650, Method 2.3.3

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

	<u>Blank</u>	<u>EP256HA</u>
Day 1	$1.6 \times 10^{10} \Omega$	$1.0 \times 10^9 \Omega$
Day 4	$9.9 \times 10^9 \Omega$	$2.1 \times 10^9 \Omega$
Day 7	$7.7 \times 10^9 \Omega$	$1.9 \times 10^9 \Omega$

Application Notes

Availability:

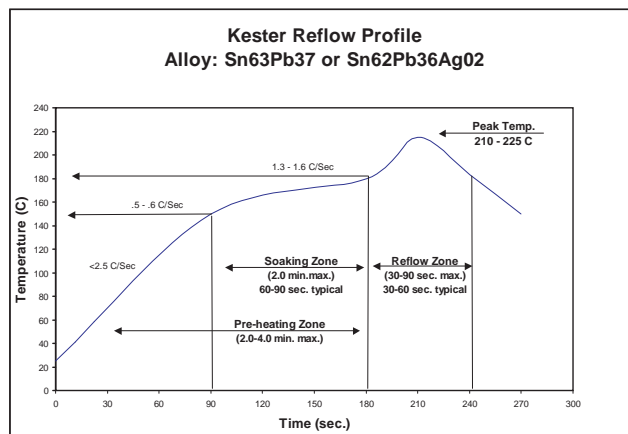
Easy Profile® 256HA is commonly available in the Sn63Pb37 and Sn62Pb36Ag02 alloys. Type 3 powder mesh is recommended, but different powder particle size distributions are available for standard and fine pitch applications. For specific packaging information, see Kester's Solder Paste Chart for available 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	Capable to a maximum speed of 200 mm/sec (8 in/sec)
Stencil Material	Stainless Steel, Molybdenum, Nickel Plated, Brass
Temperature/Humidity	Optimal ranges are 21-25°C (70-77°F) and 35-65% R.H.

Recommended Reflow Profile:

The recommended reflow profile for EP256HA made with either the Sn63Pb37 or Sn62Pb36Ag02 is shown here. This profile is simply a guideline. Since EP256HA is a highly active solder paste, it can solder effectively over a wide 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:

EP256HA is a no-clean formula. The residues don't need to be removed for typical applications. Although EP256HA 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 solderpaste to maintain consistent viscosity, reflow characteristics and overall performance. EP256HA should be stabilized at room temperature prior to printing. EP256HA 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 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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