

PureMark 202A No-Clean Solder Paste

Product Description

PureMark 202A is a no-clean, air or nitrogen reflowable solder paste specifically designed to provide maximum release from stencil. Solder paste deposition is of critical importance when printing ultrafine pitch, CSP, and 0201 component locations. In addition, PureMark 202A produces very test probe friendly residues after soldering operations have been completed. PureMark 202A has been designed for applications that require the ultimate performance with respect to testability with bed of nails test fixtures or flying probe test equipment. PureMark 202A is also capable of stencil printing after downtimes of up to 120 minutes with an effective first print down to 0.5mm (20 mil). PureMark 202A is a solder paste formula that maintains its activity and printing characteristics for up to 12 hours without any shear thinning.

- ICT probe friendly residues
- Excellent print and reflow characteristics for 0201 applications with Type 3 powder
- Capable of 2 hour idle time in printing
- Excellent printing characteristics to 0.4mm (16 mil) pitch with Type 3 powder
- High activity on all substrates, including OSPs
- Stencil Life: 12+ hours (process dependent)
- Can reflow in air or nitrogen
- Classified as ROL0 per J-STD-004

Standard Applications

90% Metal -- Stencil Printing

Physical Properties

(Data given for Sn63/Pb37, 90% metal, -325+500 mesh)

Viscosity (typical) : 1700 poise

Malcom Viscometer PCU-203 @ 10 rpm, 25°C, measurement after 9 minutes

Initial Tackiness (typical) : 33 grams

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

Slump Test: Pass

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

Solder Ball Test: Preferred

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 2.3.32

Silver Chromate: Pass

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

S.I.R., IPC (typical): Pass

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

	Blank	PureMark 202A
Day 1(24 h)	$2.0 \times 10^{10} \Omega$	$7.2 \times 10^8 \Omega$
Day 4(96 h)	$1.2 \times 10^{10} \Omega$	$1.5 \times 10^9 \Omega$
Day 7(168 h)	$1.5 \times 10^{10} \Omega$	$2.1 \times 10^{10} \Omega$

Application Notes

Availability:

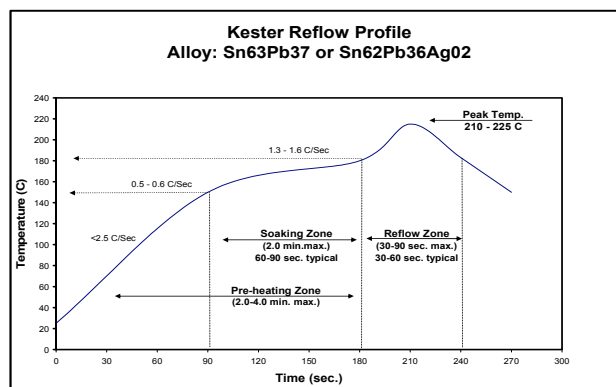
PureMark 202A is commonly available in the Sn63Pb37, Sn62Pb36Ag02 and Ag0.4Sn62.8Pb36.8 alloys. Type 3 powder mesh is recommended, but different powder particle size distributions are available for standard and fine pitch applications. For specific packaging information, see Kester's Solder Paste Chart 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 to 100 mm/sec (1-4 in/sec) recommended
Stencil Material	Stainless Steel, Molybdenum, Nickel Plated, Brass
Temperature / Humidity	Optimal ranges are 21-25°C (70-77°F) and 35-65% RH

Recommended Reflow Profile:

The recommended convection reflow profile for PureMark 202A formula made with either the Sn63Pb37 or Sn62Pb36Ag02 is shown here. This profile is simply a guideline. Since PureMark 202A 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:

PureMark 202A is a no-clean formula. The residues do not need to be removed for typical applications. Although PureMark 202A 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. PureMark 202A should be stabilized at room temperature prior to printing. PureMark 202A 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 & Safety:

This product, during handling and use, may be hazardous to health or the environment. Read the Material Safety Data Sheet and the label before using this product.

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