

KESTER® R562 SOLDER PASTE

Water Soluble

DESCRIPTION

Kester R562 Solder Paste is an organic acid, water soluble solder paste specifically designed for resistance to environmental extremes. Water soluble pastes tend to dry out in low relative humidity and slump at high relative humidity. R562 will maintain its print characteristics, tack, and activity even after exposure to environmental extremes.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

- Reduces BGA voiding to <3%
- Bright, shiny joints
- 12 hour stencil life
- Print speeds up to 6 in/sec
- Compatible with enclosed print head systems
- Consistent printing over a range of temperatures and humidity
- Capable of multiple reflow profiles before a cleaning operation is required
- Excellent solderability to a wide variety of metallizations, including Palladium
- Residues easily removed with hot DI water within 8 hours as best practice after processing
- Classified as ORM0 per J-STD-004
- Capable of off-pad printing with no solderballs after reflow dry out

STANDARD APPLICATIONS

Stencil Printing: 90% Metal

Enclosed Head Printing: 90% Metal

ROHS COMPLIANCE

MacDermid Alpha does not determine any applicable Restriction of Hazardous Substances (RoHS) exemptions for our lead containing products at the user level.

TECHNICAL DATA

Category	Results	Procedure/Remarks	
Physical Properties (Data given for Sn63Pb37, 90% metal, -325 + 500 mesh)			
Viscosity (typical)	1750 poise	Malcom Viscometer @ 10 rpm and 25 °C	
Initial Tackiness (typical)	48 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 2.4.452.4.45	
Reliability Properties			
Copper Mirror Corrosion	Low	Tested to J-STD-004, IPC-TM-650, Method 2.3.32	
Corrosion Test	Medium	Uncleaned, 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	
Surface Insulation Resistivity (SIR), IPC (Typical)	Pass	Tested to J-STD-004, IPC-TM-650, Method 2.6.3.3	
		Blank	R562
	Day 1	3.2*10 ¹⁰ Ω	3.4*10 ⁸ Ω
	Day 4	1.2*10 ¹⁰ Ω	1.9*10 ⁹ Ω
	Day 7	1.3*10 ¹⁰ Ω	4.1*10 ⁹ Ω

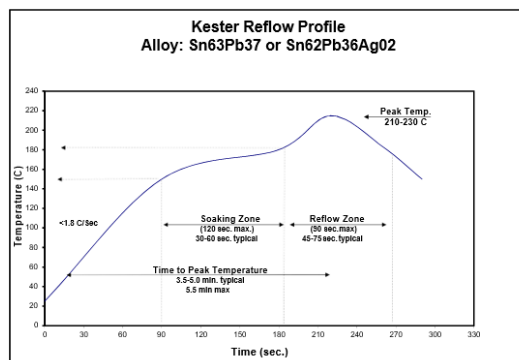
PROCESSING GUIDELINES

Printing Parameters

Squeegee Blade	80 to 90 durometer polyurethane or stainless steel
Squeegee Speed	Capable to a maximum speed of 150 mm/sec (6 in/sec)
Stencil Material	Stainless Steel, Molybdenum, Nickel Plated, Brass
Temperature/Humidity	Optimal ranges are 21 to 25 °C (70 to 77 °F) and 35 to 65% RH

Recommended Reflow Profile

The recommended reflow profile for R562 made with either the Sn63Pb37 or Sn62Pb36Ag02 is shown here. This profile is simply a guideline. Since R562 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 MacDermid Alpha Technical Support if you need additional profiling advice.



Cleaning

R562 residues are best removed using automated cleaning equipment (in-line or batch) within 8 hours of solder reflow as a best process practice. Deionized water is recommended for the final rinse. Water temperatures should be 49 to 60 °C (120 to 140 °F). If you have any questions, please contact MacDermid Alpha Technical Support.

Storage, Handling and Shelf Life

Refrigeration is the recommended optimum storage condition for solder paste to maintain consistent viscosity, reflow characteristics and overall performance. R562 should be stabilized at room temperature prior to printing. R562 should be kept at standard refrigeration conditions, 0 to 10 °C (32 to 50 °F). Please contact MacDermid Alpha Technical Support 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 to 10 °C (32 to 50 °F).

AVAILABILITY

R562 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 Packaging Chart for available sizes. The appropriate combination depends on process variables and the specific application.

RECYCLING SERVICES

We provide safe and efficient recycling services to help companies meet their environmental and legislative requirements and at the same time, maximize the value of their waste streams.

Our service collects solder dross, solder scrap, and various forms of solder paste waste. Please contact your local sales representative for recycling capabilities in your area.



SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

CONTACT INFORMATION

www.macdermidalpha.com

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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