

R229D

Mildly Activated Rosin Solder Paste

Product Description

Kester R229D is a Mildly Activated Rosin (RMA) solder paste formula specifically designed to exhibit long stencil/print life. R229D maintains its activity and printing characteristics for up to 8 hours (temperature and humidity dependent).

- Consistent viscosity
- Extended stencil life (process dependent)
- Excellent printing characteristics to 0.5mm (20 mil) pitch
- Long tack life
- Leaves bright/shiny solder joints after reflow
- Scrap is reduced due to less paste dry out
- Can reflow in air or nitrogen
- Classified as ROL1 per J-STD-004
- Compliant to Bellcore GR-78-CORE

Physical Properties

(Data given for Sn63/Pb37 and Sn62/Pb36/Ag2, 90% metal, -325+500 mesh)

Viscosity (typical) : 900 kcps

Brookfield Viscometer RVDV-II+, TF Spindle @ 5 rpm, 25°C, 1.0" spindle depth

Initial Tackiness (typical) : 48 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: 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

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

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	R229D
Day 1(24 h)	$5.2 \times 10^{10} \Omega$	$4.4 \times 10^8 \Omega$
Day 4(96 h)	$3.0 \times 10^{10} \Omega$	$2.9 \times 10^8 \Omega$
Day 7(168 h)	$3.2 \times 10^{10} \Omega$	$4.0 \times 10^8 \Omega$

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

Tested to Bellcore GR-78-CORE

	Blank	R229D
Day 1(24 h)	$1.3 \times 10^{11} \Omega$	$3.6 \times 10^9 \Omega$
Day 4(96 h)	$1.2 \times 10^{11} \Omega$	$9.9 \times 10^{10} \Omega$

Standard Applications

90% Metal -- Stencil Printing

88% Metal -- Syringe Dispensing

Application Notes

Availability:

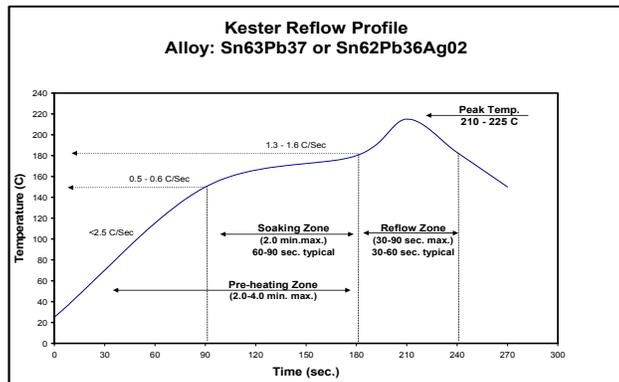
Kester R229D is commonly available in the Sn63Pb37 alloy and Sn62Pb36Ag02 alloys. Type 3 powder mesh is recommended, but different powder particle size distributions are available for standard and fine pitch applications. For specific packaging information, see Kester's Solder Paste Chart for available 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	15 to 40 mm/sec (0.6-1.6 in/sec) recommended; other speeds possible
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 R229D formula made with either the Sn63Pb37 or Sn62Pb36Ag02 is shown here. This profile is simply a guideline. Since R229D is a highly active, no-clean 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:

R229D is a RMA formula. The residues do not need to be removed for typical applications. Although R229D 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. R229D should be stabilized at room temperature prior to printing. R229D 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 (in jar packaging) 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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