

R576-8 Water-Soluble Solder Paste

Product Description

Kester R576-8 is an organic acid, water soluble solder paste formula specifically designed to exhibit long stencil/print life. R576-8 is a halide free formula that maintains its activity and printing characteristics for up to 8 hours. R576-8 exhibits excellent printing characteristics over a wide range of relative humidity conditions encountered in different working environments.

- Halide Free chemistry
- Stencil Life: 8 hours (process dependent)
- Excellent printing characteristics to 0.4mm (16 mil) pitch
- Higher tack values and longer tack life
- Leaves bright/shiny solder joints after reflow
- Scrap is reduced due to less paste dry out
- Residues easily removed with DI water
- Can reflow in air or nitrogen
- Elimination of CFC solvent cleaners
- Classified as ORH0 per J-STD-004

Standard Applications

90% Metal -- Stencil Printing

Physical Properties

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

Viscosity (typical) : 1050 kcps

Brookfield RV-DVII+, TF Spindle, 5 RPM, 25°C, 1.0" Spindle Depth

Initial Tackiness (typical) : 37 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

pH (5% solution, typical): 3.4

Mettler-Toledo MA235 pH/Ions Analyzer at paste flux level

Reliability Properties

Copper Mirror Corrosion: High

Tested to J-STD-004, IPC-TM-650, Method 2.3.32

Corrosion Test: High

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	R576-8
Day 7(168 h)	$3.2 \times 10^{10} \Omega$	$3.6 \times 10^9 \Omega$

Application Notes

Availability:

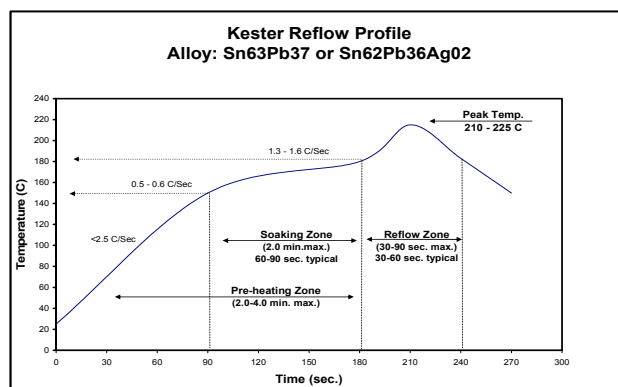
Kester R576-8 is commonly available in the Sn63Pb37 alloy and Sn62Pb36Ag02 alloys. Type 3 powder mesh is recommended, but different powder particle size distributions are available for standard and fine pitch applications. For specific packaging information, see Kester's Solder Paste Chart for available 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	Capable to a maximum speed of 60 mm/sec (2.4 in/sec), 25 to 35 mm/sec (1-1.4 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 R576-8 formula made with either the Sn63Pb37 or Sn62Pb36Ag02 is shown here. This profile is simply a guideline. Since R576-8 is a highly active, water-soluble 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:

R576-8 residues are best removed using automated cleaning equipment (in-line or batch). De-ionized water is recommended for the final rinse. Water temperatures should be 60°C (140°F).

Storage, Handling and Shelf Life:

Refrigeration is the recommended optimum storage condition for solderpaste to maintain consistent viscosity, reflow characteristics and overall performance. R576-8 should be stabilized at room temperature prior to printing. R576-8 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.

World Headquarters: 515 E. Touhy Avenue. Des Plaines, Illinois, 60018 USA

Phone: (+1) 847-297-1600 • **Email:** customerservice@kester.com • **Website:** www.kester.com

Asia Pacific Headquarters

500 Chai Chee Lane
Singapore 469024
(+65) 6449-1133
customerservice@kester.com.sg

European Headquarters

Ganghoferstrasse 45
D-82216 Gernlinden
Germany
(+49) 8142-47850
customerservice@kester-eu.com

Japanese Headquarters

20-11 Yokokawa 2-Chome
Sumida-Ku
Tokyo 130 Japan
(+81) 3-3624-5351
jpsales@kester.com.sg

The data recommendations presented are based on tests, which we considered reliable. Because Kester has no control over the conditions of use, we disclaim any responsibility connected with the use of any of our products or the information presented. We advise that all chemical products are to be used only by or under the direction of technically qualified personnel who are aware of the potential hazards involved and the necessity for reasonable care in their handling. The technical information contained herein is consistent with the properties of this material but should not be used in the preparation of specification as it is intended for reference only. For assistance in preparing specifications, please contact your local Kester office for details.