

## R276 Solder Paste

Dispensable, No-Clean Solder Paste for Leaded and Lead-free Alloys

---

### Product Description

Kester R276 Solder Paste is a no-clean solder paste specifically designed for optimal characteristics in all types of dispensing applications. R276 is available in leaded and lead-free alloys. The flow characteristics of R276 provide for excellent dispensing characteristics with a wide range of needle diameters.

### Performance Characteristics:

- Available with leaded and lead-free alloys
- Compatible with Kester EP256 stenciling solder paste
- Classified as ROL0 per J-STD-004
- Compliant to Bellcore GR-78

### Standard Applications:

For Dispensing:

- 86% Metal for -325 +500 mesh
- 86% Metal for -400 +500 mesh

### RoHS Compliance

This product meets the requirements of the Restriction of Hazardous Substances (RoHS) Directive. Additional RoHS information is located at <https://www.kester.com/downloads/environmental>.

### Physical Properties

(Data given for Sn96.5Ag3.0Cu0.5 86% metal, -325+500 mesh)

**Viscosity (typical):** 650 poise

Malcom Viscometer @ 10 rpm and 25 °C

**Initial Tackiness (typical):** 30 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 2.3.3

**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

**Surface Insulation Resistance (SIR) (typical):** Pass

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

	Blank	R276
Day 1	$1.0 \times 10^{10} \Omega$	$9.8 \times 10^8 \Omega$
Day 4	$1.3 \times 10^{10} \Omega$	$1.6 \times 10^9 \Omega$
Day 7	$1.3 \times 10^{10} \Omega$	$1.1 \times 10^9 \Omega$

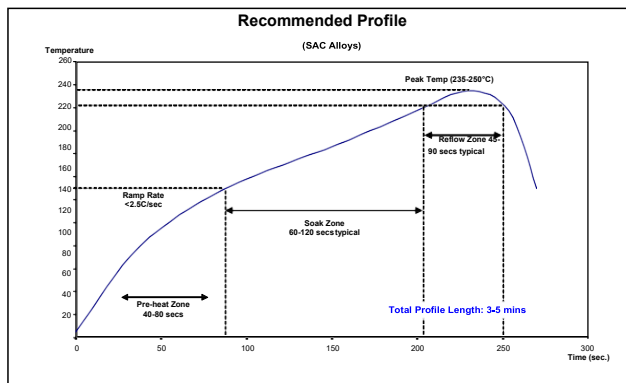
**Availability**

R276 is available in Sn63Pb37, Sn96.5Ag3.0Cu0.5, Sn43Pb43Bi14, Sn10Pb88Ag2, Sn95.5Ag3.8Cu0.7 and Sn62Pb36Ag2 alloys with the recommended Type 3 powder mesh. For specific packaging information, please refer to <https://www.kester.com>.

## Printing Parameters

<b>Needle Diameter</b>	Type 3 powder may be used with needle sizes down to 22 gauge
<b>Dispense Speed</b>	Capable of at least 4 dots per second
<b>Temperature/Humidity</b>	Optimal ranges are 21 to 25 °C (70 to 77 °F) and 35 to 65% RH

## Recommended Reflow Profile



The recommended reflow profile for R276 made with SAC alloys is shown here. This profile is simply a guideline. Since R276 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.

NOTE: The peak temperature for leaded profile should be 205 to 215 °C degrees.

## Cleaning

R276 is a no-clean formula. The residues do not need to be removed for typical applications. Although R276 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 solder paste to maintain consistent viscosity, reflow characteristics and overall performance. R276 should be kept at standard refrigeration conditions, 0 to 10 °C (32 to 50 °F). R276 should be stabilized at room temperature prior to dispensing. This can be accomplished by setting the syringe out at room temperature for 1 hour. Do not place it on a hot surface. Shelf life is 6 months from date of manufacture and when held at 0 to 10 °C (32 to 50 °F). Please contact Kester Technical Support if you require additional advice with regard to storage and handling of this material.

## Health and Safety

This product, during handling or use, may be hazardous to your health or the environment. Read the Safety Data Sheet and warning label before using this product. Safety Data Sheets are available at <https://www.kester.com/downloads/sds>.

## Contact Information

To confirm this document is the most recent version, please contact [Assembly@MacDermidAlpha.com](mailto:Assembly@MacDermidAlpha.com)

<b>North America</b> 800 West Thorndale Avenue Itasca, IL USA 60143  Phone: +1 800.2.KESTER	<b>Asia Pacific</b> 8/F., Paul Y. Centre 51 Hung To Road Kwun Tong, Kowloon, Hong Kong  Phone: +852.3190.3100	<b>Europe</b> Ganghofer Strasse 45 82216 Gernlinden, Germany  Phone: +49 (0) 8142 4785 0
---	--	--

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

DISCLAIMER: All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. No statement or recommendation shall constitute a representation unless set forth in an agreement signed by officers of seller and manufacturer. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY IS MADE. The following warranty is made in lieu of such warranties and all other warranties, express, implied, or statutory. Products are warranted to be free from defects in material and workmanship at the time sold. The sole obligation of seller and manufacturer under this warranty shall be to replace any noncompliant product at the time sold. Under no circumstances shall manufacturer or seller be liable for any loss, damage or expense, direct, indirect, incidental or consequential, arising out of the inability to use the product. Notwithstanding the foregoing, if products are supplied in response to a customer request that specifies operating parameters beyond those stated above, or if products are used under conditions exceeding said parameters, the customer by acceptance or use thereof assumes all risk of product failure and of all direct, indirect, incidental and consequential damages that may result from use of the products under such conditions, and agrees to exonerate, indemnify, defend and hold harmless MacDermid, Incorporated and its affiliates therefrom. No suggestion for product use nor anything contained herein shall be construed as a recommendation to use any product in a manner that infringes any patent or other intellectual property rights, and seller and manufacturer assume no responsibility or liability for any such infringement.

© 2019 MacDermid, Inc. and its group of companies. All rights reserved. "R" and "TM" are registered trademarks of MacDermid, Inc. and its group of companies in the United States and/or other countries.