



TECHNICAL INFORMATION

HARDMAN® Fast-Setting Non-Sag Epoxy 2 DOUBLE/BUBBLE® Red Package #04008

PRODUCT DESCRIPTION

HARDMAN Non-Sag Epoxy is a thixotropic, extra fast setting, two-component epoxy adhesive. It has a convenient mix ratio, excellent sag resistance when applied to vertical surfaces, and a smooth paste consistency. It is recommended for rapid repairs and electrical and industrial staking.

HARDMAN Non-Sag Epoxy is recommended for the following substrates:

<u>Metal</u>	<u>Plastic</u>	<u>Other</u>
Carbon Steel	Epoxy	Stone
Stainless Steel		Wood
Aluminum		Glass
		China
		Leather

TYPICAL USES

HARDMAN Non-Sag Epoxy is ideal for quick, permanent, vertical and overhead repairs. It can be used for fixturing, tacking, sealing, gap filling and staking in electrical and industrial applications.

PACKAGING

The DOUBLE/BUBBLE package is a handy, dual-pouch, one-shot, job-size packaging concept. It reduces the waste typically associated with the use of larger quantities of two-component adhesives. This unique packaging ensures that DOUBLE/BUBBLE adhesives are always factory fresh and accurately portioned for optimum adhesive performance.

HARDMAN Non-Sag Epoxy is also available in poly bottles, 1-gallon cans, 5-gallon pails and 55-gallon drums.

HOW TO USE

Surface must be clean and dry before application. Remove all chemicals, dirt, wax and oil.



FOLD SNIP SQUEEZE MIX/APPLY

Fold the DOUBLE/BUBBLE package along the center seal, snip the end, squeeze out the contents, mix thoroughly and apply.

TYPICAL UNCURED PROPERTIES

	<u>Part A</u>	<u>Part B</u>	<u>Mixed</u>
Color	Opaque Pink	Opaque White	Opaque White
Viscosity @ 25 °C, cps	465,000	400,000	Thixotropic Paste
Index @ 25 °C	3	2.6	---
Weight per Gallon, lbs.	9.9	9.61	9.75
Specific Gravity @ 25 °C	1.19	1.15	1.17
Work time, minutes	---	---	3
Handling Strength, minutes	---	---	15 - 30
Shelf Life, months	24	24	---

TYPICAL CURED PROPERTIES

(Tested at 25 °C unless otherwise indicated)

<u>Test</u>	<u>Result</u>
Hardness, Shore D	83
Maximum Service Temp.	82 °C (180 °F)

Lap Shear Strength (acid-etched aluminum to aluminum)

Cure Schedule @ 25 °C	15 min.	30 min.	60 min.
Shear Strength, psi	346	717	1,700

Lap Shear Strength (acid-etched aluminum to aluminum)

Test Temperature	-40 °C	25 °C	82 °C	149 °C
Shear Strength, psi	830	3,712	425	174

T-Peel Strength (acid-etched aluminum to aluminum)

Test Temperature	-40 °C	25 °C	82 °C
Peel Strength, pli	1	2.7	2.0



TECHNICAL INFORMATION

STORAGE AND HANDLING

Store DOUBLE/BUBBLE adhesives at room temperature in a dry environment. Extreme low temperatures may cause crystallization. Extreme high temperatures may degrade the properties.

A wide variety of cleaning solutions are available for cured and uncured epoxies and polyurethanes

SAFETY

These materials are intended for commercial and industrial use only, and the practices of good housekeeping, safety and cleanliness should be followed before, during and after use.

Although the system contains low volatility materials, care should be taken in handling. Use adequate ventilation in the work area.

These materials may cause dermatitis in susceptible individuals. Keep off skin and out of eyes. In case of accidental skin contact, wash thoroughly with soap and water. In case of eye contact, flush eyes thoroughly with water and consult a physician immediately.

Refer to Material Safety Data Sheet for additional information.

ADDITIONAL INFORMATION

Visit our web site at:

www.royaladhesives.com

Contact us at:

Royal Adhesives and Sealants, LLC
2001 W. Washington St.
South Bend, IN 46628
Phone: 800-999-GLUE
Fax: 574-246-5425
Web: www.royaladhesives.com

NOTE

The statements made herein are based on our research and the research of others, and are believed to be accurate. No guarantee of their accuracy is made; however, and the products discussed are sold without warranty, expressed or implied, including warranty of merchantability and fitness for use of this material, and upon condition that purchasers shall take their own tests to determine the suitability of such products for their particular purpose. The user assumes all risk of use or handling, whether or not in accordance with any statements of the supplier. Supplier's liability, if any, for any action arising out of the material being supplied shall be limited to replacement of material. Statements concerning the possible use of these products are not intended as recommendations to use these products in infringement of any patent.