DESCRIPTION

Elastolock® 2995 is a two component, ambient temperature curing toughened epoxy.

FEATURES & BENEFITS

- Excellent impact resistance
- Excellent water resistance
- Ambient temperature cure
- 100% solids
- No fire or explosion hazard
- Functional as sealant, filler or coating
- Color coded for easy visual inspection of mix

USES

- Designed to produce high strength bonds to rigid substrates such as steel, aluminum, concrete, wood, polycarbonate and fiberglass reinforced polyester plastics.
- Binder for grit surfacing or reflective beads on rubber, metal or concrete.
- Oil & fuel resistant sealant or adhesive.
- Concrete pipe gasket adhesive.
- Rubber to metal adhesive.
- Sandwich panel adhesive, walk-in coolers.
- Approved to: Naval Sea Command Dwg. 6521419, Raytheon L6521419, Aerojet SPC 34628 Rev. A, TRW MT 5-24 and Army SMA 5000953-C5000953.

TYPICAL TECHNICAL DATA:	EL 2995A	EL 2995B	MIXED
Color:	White	Black	Black
Mix Ratio (vol.):	1	1	----
Mix Ratio (wt.):	1	0.77	----
Wt./Gal (lbs) Nominal:	11.17 *(1.3 kg/l)*	8.65 *(1.0 kg/l)*	9.97 *(1.2 kg/l)*
Viscosity (cps) Nominal:	74,000	1,000,000	400,000
Flash Point:	None	None	None
Shelf Life:	12 months from date of manufacture		----
Work Life* (Minutes):	----	----	90

** Based on 300 Gram Mix*

PERFORMANCE PROPERTIES

TEST DATA

Lap Shear ASTM (D-1002)

TEST TEMPERATURE	RESULTS (PSI)	MPa
-67°F/*-54°C*	2624	18.1
75°F/*24°C*	2900	20.0
180°F/*82°C*	725	5.0

T-Peel (ASTM-1876), 75°F/*24°C*	2.0 piw *(0.35 KN/m)*
90° Peel (ASTM-3167), 75°F/*24°C*	17.5 piw *(3.1 KN/m)*
Hardness, Shore A	95
Tensile Elongation, %	5

PERFORMANCE PROPERTIES (CONTINUED)

TEST DATA (CONTINUED)

Lap Shear Strength

SUBSTRATE	SHEAR STRENGTH	
	PSI	MPa
Aluminum	1860	12.8
Carbon Steel	1980	13.6
Stainless Steel	2050	14.1
Copper	1200	8.3
Brass	2660	18.3
Bronze	2900	20.0
Lexan *	386	2.7
Plexiglas**	135	.9

* *Lexan is a registered trademark of the General Electric Company*
** *Plexiglas is a registered trademark of Rohm & Haas Company*

Test Procedure

Surfaces were grit blasted and solvent wiped. Adhesive was applied to both surfaces with a knife; surfaces were joined in lap joint configuration and held under 1 psi *(.007 MPa)* dead load during a 24-hour cure at room temperature. Samples were tested in lap shear at a head separation rate of 2 inches/minute.

TYPICAL TECHNICAL DATA AND PERFORMANCE PROPERTIES GIVEN FOR REFERENCE ONLY. NOT FOR SPECIFICATION PURPOSES.

APPLICATION METHOD

Surface Preparation

Cured Rubber Compounds: Abrade surface by sanding or wire brushing then scrub surface using a solvent-wet cotton cloth. Acetone is an effective general purpose cleaning solvent.

Thermoplastic Rubbers & Plastics: Solvent wipe only if experience dictates necessity to remove surface contaminants such as oily or waxy blooms.

Metals: Oily surface contamination should be removed by vapor degreasing, alkaline washing or solvent wiping. Remove oxidation chemically or mechanically - grit blasting or aluminum oxide sanding are effective mechanical methods. In large volume production assembly operations, conversion of the metal to a chemically stable surface results in the highest durability. Examples: phosphatized steel, chromated or anodized aluminum.

Concrete: Sand blast and remove residual dust with air blast. Other methods such as acid etching or possibly no preparation at all may be satisfactory, depending upon the nature of the surface and its strength; the method selected should be based on careful testing.

Fiberglass Reinforced Polyester (FRP): Wipe with methylene chloride saturated cotton cloth or grit blast.

APPLICATION METHOD (CONTINUED)

Other Plastics: Follow manufacturer's instructions for cleaning.

Glass: Clean with denatured alcohol or hot detergent wash followed by hot water rinse.

Mixing of Adhesive

Hand Mixing - Caution: Use hand protection (See warning under Suggested Bonding Procedure).

1. Measure Part B into a clean, dry mixing container (glass, metal or plastic).
2. Measure Part A into a separate container.
3. Combine Parts A & B in the mixing container on a dense surfaced mortar board and mix with stiff spatula or putty knife until a uniform black color is obtained - no white streaks visible.
4. Use within the specified work life of the adhesive. The work life will vary slightly with temperature.

Continuous Mixing

Meter mixing equipment is available for continuous machine mixing. Contact HENKEL Adhesives, Inc. for referral to manufacturers of this equipment.

Application of Adhesive

Distribute the mixed adhesive on one surface using a stiff knife or notched trowel. The spread should be uniform and the thickness should be controlled; the thickness required depends upon the conformity of the surfaces and should be determined by experimentation for each pair of surfaces.

Assemble components minimizing air entrapment in the process; press or hand roll to force out trapped air and to ensure complete wetting of the uncoated surface.

Hold surfaces in contact until adhesive cures to sufficient strength to hold the assembly together.

Flat assemblies such as rubber/metal laminations may be stacked horizontally under weight for cure. Small assemblies may be taped or mechanically clamped for cure. Vertical assemblies must be shored. The pressure required to maintain contact is in the range of 1 to 5 lbs/In.^{2} of surface area.

CURE

Room Temperature

Elastolock adhesive will achieve sufficient cure in 24 hours at temperatures above 70°F *(21°C)* to permit handling or shipping. A 72-hour waiting period is recommended prior to placing the assembly in service. The cure is slower at lower temperatures and a longer waiting period is required.

Elevated Temperature

The cure may be accelerated with heat; an equivalent cure can be accomplished at 150°F *(65.6°C)* in 6 hours. The exact cure cycle at elevated temperatures should be established by experimentation.

CLEAN UP

Cleaning of the mixing and spreading equipment before the adhesive has cured may easily be accomplished by washing with mineral spirits, ketone, or any lacquer solvent.

After curing, the epoxy can be removed only with extreme difficulty. Prolonged soaking in a chlorinated solvent, such as ethylene dichloride, will soften the adhesive and permit removal by scraping and wire brushing.

STORAGE

Elastolock adhesives may be stored for 1 year in tightly sealed containers (unmixed) at room temperature.

CAUTION

See safety sheet.

EPOXY SAFETY SHEET

Read Material Safety Data Sheet before handling, storing or using this product.

Important Safety Information - Read Before Using This Product

WARNING- This product may cause skin sensitization, dermatitis, or other allergic responses. Prevent all contact with skin. If skin contact occurs, the contaminated skin areas should be washed immediately with soap and water. Any clothing contaminated by the epoxy should be removed and cleaned immediately. Avoid inhalation of vapor. Work area should be well ventilated. **DANGER**- PREVENT CONTACT WITH EYES. IF EYE CONTACT OCCURS, IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES AND SEEK PROMPT MEDICAL ATTENTION. THIS PRODUCT IS HARMFUL IF SWALLOWED AND CAN CAUSE SERIOUS PERSONAL INJURY. IF SWALLOWED, INDUCE VOMITING: SEE A PHYSICIAN IMMEDIATELY.
PROTECTION- WEAR PROTECTIVE GLOVES, IMPERVIOUS TYPE EYE PROTECTION, SPLASH-PROOF GOGGLES (ANS 1287.1 1968).

EMPTY CONTAINER AND WASTE DISPOSAL - Scrap must be stored in an isolated and segregated area while awaiting disposal and should, in no event, be mixed with other types of scrap. Disposal by an industrial waste firm that is qualified to handle hazardous materials is recommended. Disposal must be by burial in accordance with state, local and federal regulations. Observe all of the above warnings and instructions with scrap material and empty containers. For industrial and professional use only. If resold or repackaged for household use, containers must be labeled in accordance with the Federal Hazardous Substances Labeling Act and other laws and the label must be approved by HENKEL Adhesives, Inc.

LIMITED WARRANTY
Except as provided below, we warrant our products to be free of defects and manufactured to meet published physical properties when cured and tested according to applicable specifications and HENKEL Adhesives, Inc. standards. Under this warranty, we will provide, at no charge, product in containers to replace any product proved to be defective when applied in accordance with our written instructions, and in applications recommended by us as suitable for this product. All claims must be in writing and must be made within 30 days of shipment. The absence of claims during this period will constitute a waiver of all claims with respect to claims with respect to such product. This warranty is IN LIEU OF any and all other warranties, expressed or implied, including but not limited, any implied warranty of MERCHANTABILITY or fitness for a particular purpose.

Products which may be used as part of an application or installation which is confidential or otherwise not known to and recommended by us, are accepted "as is", and with respect to those products, there are NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PURPOSE, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED. The purchaser of the product must determine suitability for the intended use and assumes all risk and liability therewith, and agrees to defend, indemnify and hold us harmless from all loss, damage, expense or claims of any kind arising from the use or handling of the products, violation of any law or regulation, breach of these terms of sale, or other act or omission by purchaser or user, or their contractors, consultants, employees or agents. Our shipment of products to you will establish your receipt of and agreement with this product bulletin, the terms and conditions of sale and MSDS.

Henkel Adhesives, Inc. products are not intended for use in medical devices without HENKEL's prior written evaluation and approval.