



# AQUASEAL-UB III™ ELASTOMERIC BRIDGING POLYUREA PRELIMINARY TECH DATA

Revised 11.16.13

## DESCRIPTION

AQUASEAL-UB III™ pure polyurea is a state-of-the-art, high-performance, spray or pour applied plural-component pure polyurea elastomer. This system is based on amine-terminated polyether resins, amine chain extenders, and MDI prepolymers. It provides a flexible, resilient, tough, monolithic membrane with water and chemical resistance.

AQUASEAL-UB III™ is formulated to be processed through a SPI Synergy Series proportioner such as the LPG™.

## FEATURES

- 100% solids. No solvents. No VOCs.
- Extended tack time to allow deep surface penetration.
- Compliant with FDA/USDA for incidental food contact.

Unlike most spray-applied polyureas, AQUASEAL-UB III™ has the unique advantage of adhering to many polymeric substrates, both new and aged, typically without the use of primers or extensive surface preparation.

In house testing has shown excellent adhesion to certain clean, dry surfaces including:

- Primers past the recoat window
- Latex rubber
- Crumb rubber surfaces
- Melamine
- Firestone SBS roofing membrane
- Epoxy
- Line-X bed liner
- SBR rubber
- Aged polyureas
- Automotive finishes
- Roofing
- Glass
- Sarnafil vinyl roofing membrane

**NOTE!** Polymer formulations vary. It is recommended that adhesion tests be performed before commencing any project using AQUASEAL-UB III™. For adhesion verification SPI encourages you to submit your (substrate) sample to SPI to be sprayed and tested.

## COLORS

AQUASEAL-UB III™ is available in Neutral, Medium Grey and Sand. AQUASEAL-UB III™ is photosensitive and will change color in a matter of minutes from spray application.

Aliphatic urethane, polyurea, and various aliphatic topcoats must be used when color stability is required.

Available in 10 gal, 30 gal, 60 gal, 110 gal and 500 gal sets, and 1500 ml cartridges.

## RECOMMENDED USES

- Repair polyurea liners.

\*Complete polymerization to achieve final strength can take up to several weeks, depending on a variety of conditions.

## WET PROPERTIES @ 77°F (25°C)

<b>Solids by Volume</b>	100%
<b>Solids by Weight</b>	100%
<b>Volatile Organic Compounds</b>	0 lbs/gal (0g/l)
<b>Theoretical Coverage DFT</b>	100 sq. ft. @ 16 mils/gal
<b>Weight per gallon (approx.)</b>	8.55 lbs. (3.87 kg)
<b>Number of Coats</b>	1-2
<b>Mix Ratio</b>	1 "A": 1 "B"
<b>Viscosity (cps) @ 77° F (25 °C)</b>	A: 550 approx. B: 650 approx.
<b>Shelf Life Unopened Containers @ 60-90°F (15-32°C)</b>	Six months

## \*\*CURED FILM PROPERTIES SPRAYED WITH HIGH PRESSURE HEATED PROPORTIONER

<b>Tensile Strength</b> ASTM D 638	>2500 psi (17.37 mpa)
<b>Elongation @ 77°F (25°C)</b> ASTM D 638	>500%
<b>Hardness (Shore A)</b> ASTM D 2240-81	±85 (0s)

Test samples were sprayed through Gusmer 20/35 HP at 3300 psi. Primaries/Hose Heat 170°F (77°C) Gap Pro Gun with SPI 000 Mixing Chamber

## \*\*CURED FILM PROPERTIES SPRAYED WITH LOW PRESSURE UNHEATED PROPORTIONER

<b>Tensile Strength</b> ASTM D 638	+1350 psi (9.38 mpa)
<b>Elongation @ 77°F (25°C)</b> ASTM D 638	>500%
<b>Hardness (Shore A)</b> ASTM D 2240-81	±75 (0s)

Test samples were sprayed through LPG Proportioner with SPI LOCK N LOAD gun using the SPI polyurea nucleation kit

## \*\*CURED FILM PROPERTIES Poured WITH LOW PRESSURE UNHEATED PROPORTIONER

<b>Tensile Strength</b> ASTM D 638	>2700 psi (18.77 mpa)
<b>Elongation @ 77°F (25°C)</b> ASTM D 638	>550%
<b>Hardness (Shore A)</b> ASTM D 2240-81	±85 (0s)

## CURING SCHEDULE

Gel	30 – 90 sec.
Tack Free	2 – 5 min.
Post Cure*	24 hours
Recoat	Up to 24 hours (see below)

Test samples were poured through SPI TI-13 proportioner with Static Mix gun at 150 psi at 70°F (21°C)

\*\*All cured film properties are approximate since processing parameters, ad-mixture types, and quantities change physical properties of the cured elastomer. All samples for above tests were force cured or aged for more than three weeks, it is recommended that the user perform their own independent testing. Complete polymerization to achieve final strength can take up to several days, depending on a variety of conditions.

\*It is recommended that oxidized surfaces be power washed with 2500 – 3500 psi, water pressure to achieve maximum adhesion of AQUASEAL-UB III™. If there is a possibility of surface contamination, scrub with a solution of ¼ tsp Dawn detergent plus 1 tbsp of vinegar per 1 gallon of warm water, followed by a thorough water rinse. SPI Prep Wipe™ applied prior to application of AQUASEAL-UB III™ generally increases adhesion to certain finishes.

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## SURFACE PREPARATION

It is recommended that oxidized polymeric surfaces be power washed with 2500 – 3500 psi water pressure to achieve maximum adhesion of AQUASEAL-UB III™. If there is a possibility of surface contamination, scrub with a solution of ¼ tsp. Dawn detergent plus 1 tbsp. of vinegar per 1 gallon of warm water, followed by a thorough water rinse.

SPI Prep Wipe™ applied prior to application of AQUASEAL-UB III™ generally increases adhesion to certain finishes. For applications to concrete refer to SPI Concrete Prep Guide.

## GENERAL APPLICATION INSTRUCTIONS

Apply AQUASEAL-UB III™ only to clean, dry, sound surfaces free of loose particles or other foreign matter. A primer may be required, subject to type and/or condition of the substrate. Consult technical service personnel for specific primer recommendations and substrate preparation procedures.

AQUASEAL-UB III™ can be sprayed over a broad range of ambient and substrate temperatures. Contact technical service personnel for specific recommendations, pricing, and availability of spray and auxiliary equipment.

To reduce the possibility of blisters and blow holes when applying AQUASEAL-UB III™ to cementitious or other porous surfaces:

1. Do not apply on damp or wet substrates.
2. Start spray application after peak heat of the day when surface is cooling.
3. Do not apply on areas in direct sunlight.
4. The temperature of the AQUASEAL-UB III™ material and hose temperature should be approximately the same temperature as the substrate being sprayed. Adhere to instructions on container label.

It is recommended that AQUASEAL-UB III™ be sprayed in multi-directional (north-south/east-west) passes to ensure uniform thickness.

To achieve optimum mix and rise, nucleation at the gun needs to be a minimum of 9 cfm at 90 psi.

To spray AQUASEAL-UB III™ using the nucleating kit processed with a SPI synergy proportioner, the liquid temperature must be a minimum 80°F (21°C) maximum 100°F (38°C) and optimum 90°F (32°C).

Follow the instructions attached to “A” and “B” containers.

## MIXING AND THINNING

Thoroughly agitate the “B” components of this product prior to application. Use a SPI folding blade mixer, or equivalent equipment approved by SPI. Install mixer through the extra 2” bung hole provided on all “B” drums. Care must be taken not to cross contaminate the individual components with the mixing equipment. Thinning is not required. Using any thinner may adversely affect product performance. The polyol “B” component must be thoroughly power mixed each day, prior to use. Contact a SPI technician regarding proper mixing equipment.

## GENERAL SAFETY, TOXICITY & HEALTH DATA

Material Safety Data Sheets are available for this coating material. Any individual who may come in contact with these products should read and understand the M.S.D.S. **CHEMTREC EMERGENCY NUMBER 1-800-424-9300**

**WARNING:** Contact with skin or inhalation of vapors may cause an allergic reaction. Avoid eye contact with the liquid or spray mist. Hypersensitive persons should wear protective clothes, gloves and use protective cream on face, hands and exposed areas.

**CONTAMINATION:** Avoid moisture contamination in containers. Containers should not be resealed if contamination is suspected as carbon dioxide created pressure can develop. Do not attempt to use contaminated material.

**EYE PROTECTION:** Safety glasses, goggles, or a face shield are recommended.

**SKIN PROTECTION:** Chemical resistant gloves are recommended. Cover as much of the exposed skin area as possible with appropriate clothing.

**RESPIRATORY PROTECTION:** Use a respirator approved for isocyanates and organic vapors. If you are not sure or not able to monitor levels, or if you are spraying in an enclosed/indoor area, use MSHA/NIOSH approved supplied air respirator. Consider the application and environmental concentrations in deciding if additional protective measures are necessary.

**INGESTION:** Do not take internally. It is believed that ingestion of polymeric isocyanates would not be fatal to humans, but may cause inflammation of mouth and stomach tissue.

## LIMITATIONS

- Apply AQUASEAL-UB III™ when surface and air temperatures are above 40°F (5°C) and rising, and above 7°F (3°C) above dew point.
- This product is for professional use only.
- Avoid moisture contamination in containers. Containers should not be resealed if contamination is suspected, CO<sub>2</sub> created pressure can develop. Do not attempt to use contaminated material
- Undried air exposed to liquid components will reduce physical properties of the cured coating.
- DO NOT APPLY AQUASEAL-UB III™ as a waterproofing barrier on the negative side of a structure where hydrostatic pressure is possible.
- It is recommended that AQUASEAL-UB III™ be top coated with an impermeable polyurea when applied on the positive side of a structure where hydrostatic pressure is possible.
- This product is for professional use only.

**Note:** The material supplied is two components (Component “A”/Component “B”) used to formulate AQUASEAL-UB III™. The quality and characteristics of the finished polymer is determined by the mixture and application of the two components.

## WARRANTY & DISCLAIMERS

Specialty Products, Inc. has no role in the manufacture of the finished polymer other than to supply its two components. It is vital that the person applying this product understands the product, and is fully trained and certified in the use of plural-component equipment.

Specialty Products, Inc., an Alaska corporation, warrants only that the two components of this product shall conform to the technical specifications published in the product literature.

The quality and fitness of the product are dependent upon the proper mixture and application of the components by the applicator. There are no warranties that extend beyond the description on the face of this instrument.

**Failure to apply the product within the parameters stated on this document shall void the warranty.**

SPECIALTY PRODUCTS, INC. MAKES NO WARRANTY OF MERCHANTABILITY OF THE PRODUCT OR OF FITNESS OF THE PRODUCT FOR ANY PARTICULAR PURPOSE.

Specialty Products, Inc. makes no warranty as to the quality of any product modified, supplemented, tinted, or altered in any way after it leaves the manufacturing plant.

Specialty Products, Inc. does not warrant that this product is suitable for use as a liner for potable water containers. Use of this product in a potable water container could be hazardous to health if it is improperly processed or applied.

The liability of Specialty Products, Inc. for any nonconformity of the product to its technical specifications shall be limited to replacement of the product.

The sole exclusive remedy of buyer, which is to have Specialty Products, Inc. replace any nonconforming product at no cost to buyer, is conditioned upon buyer notifying Specialty Products, Inc. or its distributor in writing of such defect within thirty days of the discovery of such defect.

Specialty Products, Inc. shall not be liable for any direct, incidental, or consequential damages resulting from any breach of warranty.

The data presented herein is intended for professional applicators or those persons who purchase or utilize this product in the normal course of their business.

The potential user must perform any pertinent tests in order to determine the product's performance and suitability in the intended application, since final determination of fitness of the product for any particular use is the responsibility of the buyer.

The aforementioned data on this product is to be used as a guide and is subject to change without notice.

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MSDS A



MSDS B



PROFILE