



AQUASEAL HI-RISE X3™ ELASTOMERIC BRIDGING POLYUREA PRELIMINARY TECH DATA

Revised 11.16.13

DESCRIPTION

AQUASEAL HI-RISE X3™(X3™) is a unique elastomer that expands approximately 300% of its original volume during the spray application. In place yield is ±50 mils per gallon per 100 sq. ft. when sprayed through a SPI LOCK N LOAD™ gun. As X3™ rises, it bridges substrate imperfections to virtually eliminate blowholes and pinholes when applied to porous surfaces such as vertical poured concrete and concrete masonry units (cmu). X3™ is formulated with the "ULTRABOND™" molecule therefore is self-priming in most instances.

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, X3™ 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
- Concrete
- Latex rubber
- SBR rubber
- Crumb rubber surfaces
- Aged polyurea
- Glass
- Epoxy
- Certain roofing membrane
- Wood
- Most metals
- Shotcrete substrates

NOTE! Polymer formulations vary. It is recommended that adhesion tests be performed before commencing any project using X3™. For adhesion verification SPI encourages you to submit your (substrate) sample to SPI to be sprayed and tested.

COLORS

X3™ is available in neutral, Medium Grey and Sand. X3 is photosensitive and will change color in a matter of minutes from spray application.

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

RECOMMENDED USES

- Spray applied basecoat to minimize surface preparation labor
- To fill and protect a variety of porous surfaces.
- Exterior of concrete basements and foundations.
- Waterproofing exterior basements and foundations.
- Protective elastomer for sprayed-in-place urethane foam.
- Roof Systems (metal, concrete, wood, etc.).
- Repair existing containment liners.
- To fill or repair control joints, random cracks, and shallow spalls on concrete surfaces.
- Earthen containment lining used with or without geotextile fabric.
- Wastewater containment as a resurfacers

WET PROPERTIES @ 77°F (25°C)

| | |
|---|----------------------------------|
| Solids by Volume | 100% |
| Solids by Weight | 100% |
| Volatile Organic Compounds | 0 lbs/gal (0g/l) |
| Theoretical Coverage DFT | 100 sq. ft. @ 50 mils/gal |
| Weight per gallon (approx.) | 8.55 lbs. (3.87 kg) |
| Number of Coats | 1-2 |
| Mix Ratio by Volume | 1 "A": 1 "B" |
| Viscosity (cps) @ 77° F (25 °C) | A: 800 approx. B: 700 approx. |
| Shelf Life Unopened Containers @ 60-90°F (15-32°C) | Six months |

*CURED FILM PROPERTIES SPRAYED WITH LOW PRESSURE UNHEATED PROPORTIONER

| | | |
|---|--------------|---|
| R-Value (initial) | 2.7 per inch | |
| Tensile Strength ASTM D 638 | ±180 psi | |
| Elongation @ 77°F (25°C) ASTM D 638 | >243% | |
| Adhesion to Concrete | >100 psi | |
| Abrasion Resistance 1 kg. 1000 rev. | H-18 wheel | 54.8 mg. lost |
| | CS-17 wheel | 4.4 mg. lost |
| Hardness (Shore A) ASTM D 2240-81 | ±50 (0s) | |
| Mandrel Bend Test ASTM D522-93a | Passed | Mandrel Size – 1" Test Temp -60°F (-51°C) |

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

CURING SCHEDULE

| | |
|--------------------|----------------------------|
| Gel | 30 – 90 sec. |
| Tack Free | 4 – 6 min. |
| Post Cure** | 24 hours |
| Recoat | Up to 24 hours (see below) |

**All cured film properties are approximate since processing parameters, admixture 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 weeks, depending on a variety of conditions.*

Available in 10 gal, 30 gal, 110 gal, and 550 gal sets.

SURFACE PREPARATION

It is recommended that oxidized polymeric surfaces be power washed with 2500 – 3500 psi water pressure to achieve maximum adhesion of X3™. If there is a possibility of surface contamination, scrub with a solution of ¼ tsp Dawn detergent plus 1 tbs of vinegar per 1 gallon of warm water, followed by a thorough water rinse.

SPI Prep Wipe™ applied prior to application of X3™ generally increases adhesion to certain finishes. For applications to concrete refer to SPI Concrete Prep Guide.



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GENERAL APPLICATION INSTRUCTIONS

Apply X3™ 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.

X3™ 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 X3™ 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 X3™ 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 X3™ 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 X3™ 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 X3™ when surface and air temperatures are above 40°F (5°C) and rising, and 7°F (3°C) above dew point.
- Avoid moisture contamination in containers. Containers should not be resealed if contamination is suspected, CO₂ 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.
- This product has not been tested for flame spread or smoke development.
- DO NOT APPLY X3™ as a waterproofing barrier on the negative side of a structure where hydrostatic pressure is possible.
- It is recommended that X3™ 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 X3™. 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.

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