



WATERSAFE-UB™

100% SOLID AROMATIC POLYUREA

NSF/ANSI Standard 61 Section 5-2011 Certified
Revised 04.25.14

DESCRIPTION

WATERSAFE-UB™ pure polyurea is NSF/ANSI 61 compliant by an ANSI accredited lab, approved for direct contact with potable water while providing a tenacious bond to certain thermoset plastic surfaces. WATERSAFE-UB™ adheres to many polymeric substrates both new and aged, typically without the use of primers or extensive surface preparation. It is a fast setting, rapid curing, 100% solids, flexible aromatic, two component spray polyurea that can be applied to a variety of substrates including suitably prepared concrete and metal surfaces. It's extremely fast set gel time makes it suitable for applications down to -20°F. It may be applied in single or multiple applications without appreciable sagging and is relatively insensitive to moisture and temperature allowing application in most temperatures.

FEATURES

POTABLE WATER FEATURES:

- ANSI/NSF 61 Approved for Potable Water
- Zero VOC (100% Solids)
- No Toxic Vapors
- Good Chemical Resistance
- Seamless
- Coats Properly Prepared Carbon or Mild Steel without Primer
- Installed with or without Reinforcement in Transitional Areas
- Excellent Thermal Stability
- Meets USDA Criteria
- Non-Reactives

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

- Primers Past the Recoat Window
- Aged Polyurea
- Latex Rubber
- Crumb Rubber Surfaces
- Epoxy
- Automotive Finishes
- Roofing
- Glass
- Sarnafil Vinyl Roofing Membrane

RECOMMENDED USES

- | | |
|--|---------------------------|
| • Concrete/Steel Water Storage Tanks | • Refineries |
| • Fertilizer Plants | • Secondary Containment |
| • Structural Steel | • Warehouse Floors |
| • Mining Operations | • Cold Storage Facilities |
| • Food Processing Plants | • Landfill Containment |
| • Marine Environments | • Paper and Pulp Mills |
| • Power Plants | • Parking Garage Decks |
| • Water and Wastewater Treatment | • Recoat Urethane Liners |
| • Texturing Aged Polyurea | • Repair Polyurea Liners |
| • Walkways and Balconies | • Airports |
| • Industrial and Manufacturing Facilities | |
| • Coating over Organic Primers that are past their recoat window | |
| • Top Coat Compatible Existing Membrane Liner | |
| • Recoat over other polymer based substrates used for flooring, wall covering, and infrastructure protection | |

COLOR

WATERSAFE-UB™ is available in SPI standard light Blue color. Custom colors available upon request.

PROPERTIES	
Solids by Volume	100%
Solids by Weight	100%
Volatile Organic Compounds	0 lbs/gal (0g/l)
Theoretical Coverage DFT	Spray - 1600 sq. ft./gal@ 1 mils
Weight per gallon (approx.)	8.8 lbs. (3.99 kg) / gal
Number of Coats	1-2
Shelf Life Unopened Containers @ 65°F (18°C)	Six months
Pot Life @ 150°F	3 – 5 seconds
Mix Ratio	1 "A": 1 "B"
Viscosity 150° - 160°F (66.5° - 71°C),	"A" side 1311 ± 20 cps "B" side 249 ± 20 cps
Density	"A" side 9.21 lbs./gal "B" side 8.35 lbs./gal
Specific Gravity	"A" side 1.10 g/cc "B" side 1.001 g/cc
Flash Point	>93°C (200°F)
Service Temperature	-40°F to 150°F (-40°C to 66°C)
Recommended applied thickness	>2mm
Return to Service:	Foot Traffic: 1 – 4 hours
Dependant on substrate and ambient temps	Full Service: >24 hours
Potable Water Certification US ANSI NSF-61	Pass
Tensile Strength ASTM D 412*	3100 psi (21.6 mpa) ± 200 psi
Elongation ASTM D 412*	581% ± 50%
Abrasion Resistance ASTM D4060, CS17 wheel, 1000 cycles, 1kg load (maximum)	6.0 mg loss
Hardness (Shore D) ASTM D2240	50 ± 5 D
Tear, Die "C" ASTM D 412*	450 pli (78.80 KN/m) ± 50 pli

CURING SCHEDULE	
Gel	4 seconds
Tack Free	30 - 45 seconds (thickness and substrate temperature dependent)
Post Cure	24 hours (approx.)
Recoat	0 – 12 hours @77°F (25°C)
To Immersion	24 hours @77°F (25°C)

**These physical properties from sample sprayed with Graco HXP3 @ 2500 psi dynamic (172 bar). Primaries/Hose Heat 170°F (77°C) using Graco MP Fusion Gun with 29/29 mixing chamber and .040 ceramtip. Different machine and parameter will change these properties. User should perform their own independent testing as properties are approximate.*

****Complete polymerization to achieve final strength and adhesion can take up to several days or weeks depending on a variety of conditions or product type.*

PACKAGING

Standard 110 gallon sets. Also available in 10, 30, and 60 gallon sets.

SURFACE PREPARATION

In general, coating performance and adhesion are directly proportional to surface preparation. Most failures in the performance of surface coatings can be attributed to poor surface preparation. Polyurea coatings rely on the structural strength of the substrate to which they are applied. All surfaces must be free of dust, dirt, oil, grease, rust, corrosion,

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and other contaminants. When coating substrates previously used, it is important to consider the possibility of substrate absorption, which may affect the adhesion of the coating system, regardless of the surface preparation. SPI recognizes the potential for unique substrates from one project to another. The following information is for general reference; for project-specific questions, contact SPI.

NEW AND OLD CONCRETE: Refer to SSPC-SP13/NACE 6, or ICR1 03732:CSP 3-5 New concrete must be cured for 28 days prior to product application. Surface must be clean, dry, sound, and offer sufficient profile for product adhesion. Remove all dust, dirt, oil, form release agents, curing compounds, salts, efflorescence, laitance, and other foreign matter by shotblasting and/or suitable chemical means, in accordance with local chemical regulations. Rinse thoroughly, to achieve a pH between 8.0 and 11.0. Allow to dry completely. If old concrete has a surface that has deteriorated to an unacceptably rough surface consult with SPI regarding a repairing agent for the cracks, spalls, bug holes and voids. Upon full cure of the repairing agent, prime the entire surface intended for coating. Concrete Surface Preparation Reference: ASTM D4258, ASTM D4259, ASTM D4260, ASTM F1869, and ICR1 03732. **WOOD:** All wood should be clean, dry, and free of any knots, splinters, oil, grease, or other contaminants. Splintered or rough areas should be sanded. Knots should be repaired. Upon full cure of repairing agent, prime the entire surface intended for coating. **STEEL (Atmospheric and Immersion Exposure):** Remove all oil, grease, weld spatters and round off any sharp edges from surface. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/Nace1. Optimum surface profile is 4 mils. Prime and shoot WATERSAFE-UB™ onto any bare metal the same day as it is cleaned to minimize any potential flash rusting. **ALUMINUM:** Aluminum should be blasted with aluminum oxide or sand, and not with steel or metal grit. Excessive blasting may result in a warped or deformed surface. After blasting, wash aluminum with commercially available aluminum cleaner. Allow to dry, then prime. **BRASS AND COPPER** Brass and Copper should be blasted with sand, and not with steel or metal grit. Remove all dust and grease prior to applying primer. **GALVANIZED SURFACES:** Clean and degrease any contaminated surfaces before priming. Do not blast galvanized surfaces with an abrasive grit. An adhesion test is recommended prior to starting the project. **FIBERGLASS REINFORCED PLASTIC:** The gel coat should be lightly blasted or sanded with 80 grit sandpaper and cleaned. **PLASTIC FORMS:** Enhanced adhesion is obtained when the form is mechanically abraded. When coating polystyrene, do not use a solvent-based primer. **TEXTILES, CANVAS, FABRICS:** Adhesion to most fabrics, geothermal membranes and textiles does not require a primer. **STAINLESS STEEL:** Stainless steel may be grit blasted and degreased before priming. Some stainless steel alloys are so inert that it is not possible to achieve a satisfactory bond. An adhesion test is recommended prior to starting the project. **NEW AND OLD CAST IRON:** Blast with a steel grit and degrease before priming. Old cast iron is difficult to prepare for a satisfactory bond. It can absorb oil and water soluble contaminants that will keep returning to the surface after the coating system has been applied and affect the coating system adhesion. An adhesion test is recommended prior to starting the project. **ALL OTHER SURFACES:** An adhesion test is recommended prior to starting the project.

RECOMMENDED EQUIPMENT SETTINGS

- Standard 1:1 ratio, heated, plural-component equipment developing a minimum of 2500 psi (17.38 mpa) dynamic pressure with heating capabilities to 160°F (71°C) will adequately spray WATERSAFE-UB™. These include PMC GH-25, GH-40, PHX -25, PHX-40, Graco 20/35, 20/35 Pro, H-3500, HV-20/35, Reactor E-XP2, H-XP2 @, H-XP3, ad. Gun models include Fusion MP, and GX-7 DI.
- Pre-heater temperature should be at 160°F – 170°F (+71°C - +76°C).
- Hose temperature should be at 160°F – 170°F (+71°C – +76°C). A hose thermometer inserted under the insulation near the gun should read a minimum of 140°F – 150°F (+60°C – +65°C)
- Physical properties will be enhanced when sprayed at higher pressure (3000 psi or more) (20.8 mpa).
- Other application equipment may be acceptable depending on product and application. Contact SPI technical service for specifics.

MIXING AND THINNING

WATERSAFE-UB™ may not be diluted under any circumstances. Thinning is not required. Using any thinner may adversely affect product performance. Thoroughly mix Part "B" (resin side) with SPI approved air driven mixer power equipment until a homogenous mixture and color is obtained.

GENERAL SAFETY, TOXICITY & HEALTH DATA

Safety Data Sheets are available on 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.

CLEAN UP: Use DPM, NMP, and Polyclean.

EYE PROTECTION: Safety glasses, goggles, or a face shield are recommended. **SKIN PROTECTION:** Chemical resistant gloves are recommended. Cover as much 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 when 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

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

The information herein is believed to be reliable, but unknown risks may be present. Specialty Products, Inc. makes no warranties, expressed or implied, including patent warranties or warranties of merchantability or fitness of use, with respect to products or information set forth herein. Nothing contained herein shall constitute permission or recommendation to practice any invention covered by a patent without a license from the owner of the patent.

Accordingly, the buyer assumes all risks whatsoever as to the use of these materials and buyer's exclusive remedy as to any breach of warranty, negligence, or other claim shall be limited to the purchase price of the materials. Failure to adhere to any recommended procedures shall relieve Specialty Products, Inc. of all liability with respect to the materials and the use thereof.

APPLICATION

- Surface temperature must be at least 5°F above the dew point.
 - WATERSAFE-UB™ should be sprayed in multi-directional (north-south/east-west) passes to ensure uniform thickness.
 - This product is for professional use only.
 - This product must be stored at temperatures above 60°F. Avoid freezing temperatures. Store drums on wooden pallets to avoid direct contact with the ground.
 - Minimum material/container temperature for spray application 70°F (21°C).
 - 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.
- Do not open until ready to use. Both Part "A" and "B" containers must be fitted with desiccant device during use.

Note: The material supplied is two components (Component "A"/Component "B") used to formulate this product. The quality and characteristics of the finished polymer is determined by the mixture and application of the two components.

WARRANTY & DISCLAIMER

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.

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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