



POLYUREA 603

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PRODUCT DESCRIPTION

Polyurea 603 is a color-stable, aliphatic, two-component spray-applied elastomer designed for protective and waterproofing applications. It is suitable for both vertical and horizontal surfaces and creates a uniform, seamless membrane at the required thickness over substrates such as concrete, metal, fiberglass, and geotextile fabrics. Its rapid gel and cure times enable single or multiple coats to be applied with minimal sagging, and it performs reliably even in the presence of moisture.

GENERAL USES

Recommended Uses: Beverage/Food Processing Plants, Cold Storage Facilities, Amusement Parks/Entertainment, Environmental, Planters/ Tunnels/ Underground Vaults, Industrial/Manufacturing Facilities, Marine, Institutional/Medical/ Pharmaceutical, Military, Mining/Timber, Parking Structures, Transportation and Vehicles, Utilities

Features: Very low temperature resistance, Excellent water resistance, 0 VOC's - 100% Solids, Color stable, Odorless, Thermal Stability - Very Good, USGBC LEED, EQ Credit 4.2: Low-emitting VOC Compliant Materials

TECHNICAL DATA

	UNITS	VALUES	TEST METHOD
MIX RATIO BY VOLUME		1A:1B	
GEL TIME @ 150°F (66°C)	sec	13-15* - Sprayed	
TACK FREE TIME	sec	45* - Sprayed	
RECOAT TIME	hrs	0-6 - Sprayed	
SHORE HARDNESS	Shore D	57 ± 2 - Sprayed	ASTM D-2240
TENSILE STRENGTH	psi	3150 - Sprayed	ASTM D412
ELONGATION	%	725 - Sprayed	ASTM D412
TEAR RESISTANCE, DIE C	pli	495 - Sprayed	ASTM D624
PERCENT SOLIDS	%	100 (0 g/l VOCs) - Calculated	ASTM D2369
QUV EXPOSURE (12,000 HOURS)1	Delta E	<1.0 - Sprayed	ASTM G154
TABER ABRASION	mg loss / 1000 cycles	28 - Sprayed	ASTM D4060

NOTE: PHYSICAL PROPERTIES MAY VARY ON THE TYPE OF SPRAY EQUIPMENT USED. THE END USER SHOULD CHECK THE SUITABILITY OF THIS PRODUCT PRIOR TO USE

*Thickness and substrate sensitive

CONCRETE REPAIR

If the concrete surface is not suitable for direct coating, apply an appropriate primer, or a primer combined with sand, to act as a repair layer. After the repair has fully cured, prime the entire area to be coated. Consult Rugged Coatings to determine the most suitable primer for your specific substrate.

MIXING PROCEDURES

Thoroughly mix Polyurea 603 Part B (Resin) using air-driven power tools until the blend is uniform in color and consistency, with no visible streaks or striations.

COVERAGE RATE

One gallon (3.79 liters) of Polyurea 603 covers approximately 1,600 square feet at a thickness of 1 mil (0.025 mm) and may be applied in a single coat or multiple passes to reach the required thickness.

STORAGE

Polyurea 603 has a shelf life of one year from the date of manufacture when stored in factory-sealed containers. Both Part A and Part B should be stored at temperatures between 55°F and 95°F (avoid freezing conditions). Keep containers tightly sealed to prevent condensation, moisture, or water contamination of either component. Flush partially used containers with nitrogen before resealing.

SURFACE PREPARATION

Proper surface preparation is the critical first step before applying any coating. The coating's performance depends heavily on its ability to bond effectively with the substrate. It is widely recognized that correct surface preparation is the single most important factor in ensuring the overall success of a coating system. Even small amounts of contaminants—such as oil, grease, oxides, or other residues—can significantly reduce adhesion.

Ensure all surfaces are clean, dry, structurally sound, and provide sufficient profile for proper product adhesion. Remove dust, efflorescence, laitance, salts, curing compounds, dirt, oil, form release agents, and any other foreign material. Conduct an adhesion test before beginning any coating project.

For steel, achieve a surface profile of 4-6 mils.

Concrete should be fully cured for at least 28 days prior to application, with a minimum compressive strength of 3,000 psi and tensile strength of 220 psi. Concrete surfaces should be prepared by shot blasting to achieve a CSP 4-6 profile.

EQUIPMENT CLEAN-UP

Immediately clean all equipment after use with a solvent that is environmentally safe and permitted by local regulations. Cured or dried material must be removed mechanically. Ensure you understand your equipment and perform regular maintenance according to recommended procedures.

APPLICATION

A primer is recommended for all substrates, except properly prepared steel (note: immersion service always requires a primer). Before application, precondition both Part A and Part B to 75°F–80°F (24°C–27°C). Ensure the substrate and ambient air temperature are between 40°F and 104°F, and at least 6°F above the dew point with rising conditions. Equip Part A with a desiccant dryer. Apply Polyurea 603 using a plural-component, high-pressure, 1:1 ratio heated spray system.

PACKAGING

Polyurea 603 is supplied as a "kit" containing 52 gallons of Part A (Isocyanate) and 52 gallons of Part B (Resin), packaged in two 55-gallon drums. Larger quantities are available in 275-gallon IBC totes.

COLOR

Available colors include Black, White, Grey, and Neutral. Add colorant to Part B (Resin) only. Custom or non-standard colors can be provided upon request.

SPRAY MACHINE REQUIREMENTS

- Capacity minimum 20 lbs. per minute
- Static pressure 2800 – 3000psi
- Spraying pressure 2500psi
- Pressure balance 100 variance desirable
- 300 psi variance maximum
- Temperatures preheaters & hose 170°F each. Check with your local representative
- Polyurea 603 should be sprayed in a smooth pattern, to establish uniform thickness and appearance. Perform a substrate adhesion test (if required) seven days after application of Polyurea 603.

WARRANTY AND DISCLAIMER

Rugged Coatings warrants Polyurea 603 to be free from defects in materials and manufacturing. Under this warranty, we will provide, at no charge, a quantity of Polyurea 603 sufficient to replace any Polyurea 603 proven to be defective when applied according to our written instructions and in applications recommended by us as suitable for the product. THIS LIMITED WARRANTY IS THE BUYER'S SOLE AND EXCLUSIVE REMEDY AGAINST RUGGED COATINGS REGARDING THE PRODUCT. IN NO EVENT SHALL RUGGED COATINGS BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE OR OTHER DAMAGES ARISING FROM THE USE OR PERFORMANCE OF THE PRODUCT. Since methods of application and on site conditions can affect performance, RUGGED COATINGS MAKE NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE REGARDING THE PRODUCT, AND RUGGED COATINGS HEREBY DISCLAIM ALL SUCH OTHER WARRANTIES. The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of Rugged Coatings. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of the publication. Consult your Rugged Coatings Technical Representative to obtain the most recent Product Data **Information**. If further information is needed, contact Rugged Coatings Technical Service at 205-440-4996.