



POLYUREA 403

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PRODUCT DESCRIPTION

Polyurea 403 is a spray-applied, modified aromatic polyurea coating composed entirely of solids. It is engineered to deliver long-lasting protection in commercial, industrial, and manufacturing settings, with excellent resistance to abrasion and chemical exposure. The product is suitable for use on both vertical and horizontal surfaces and bonds well to properly prepared concrete, wood, metal, and a variety of other substrates. Its rapid gel and cure characteristics enable multiple coats to be applied quickly while minimizing sag and runoff.

GENERAL USES

Recommended Uses: Truck bed liners, General industrial, OEM applications

Features:

- Quick cure time
- Great abrasion resistance
- Good chemical resistance
- 100% Solids

TECHNICAL DATA

	UNITS	VALUES	TEST METHOD
MIX RATIO BY VOLUME		1A:1B	
GEL TIME @ 150°F (66°C)	sec	2-4	
TACK FREE	sec	<5	
VISCOSITY @ 75°F (24°C)			
PART A	cps	700-1200	Brookfield
PART B	cps	800-1200	Brookfield
SHORE HARDNESS	Shore D	55 ± 5	ASTM D2240
TABER ABRASION (CS-17)	mg/1000 cycles	>2	ASTM D4060
TENSILE	psi	3000 ± 300	ASTM D412
ELONGATION	%	260 ± 20	ASTM D412
TEAR	pli	480 ± 40	ASTM D624

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

APPLICATION

A primer should be used on all substrates, with the exception of properly prepared steel; however, immersion service applications do require a primer. Before application, condition both Part A and Part B to a temperature range of 75°F–80°F (24°C–27°C). Verify that the substrate and ambient air temperatures are between 40°F and 104°F, and that they are at least 6°F above the dew point and increasing. Install a desiccant dryer on Part A. Polyurea 403 should be applied using heated, high-pressure plural-component spray equipment set to a 1:1 mix ratio.

STORAGE

Polyurea 403 has a usable shelf life of one year from the manufacturing date when stored in unopened, factory-sealed containers. Both Part A and Part B should be kept at storage temperatures ranging from 60°F to 95°F, and exposure to freezing conditions should be avoided. Containers must be kept tightly closed to prevent condensation, moisture, or water from contaminating either component. For partially used containers, flush with nitrogen before resealing to maintain product integrity.

PACKAGING

The product 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. It is also available in 275-gallon IBC totes.

COLOR

Standard colors include black and neutral, with non-standard colors and color packs available upon request. Aromatic polyureas may yellow or darken over time when exposed to ultraviolet light and/or direct sunlight.

CONCRETE REPAIR

If the concrete surface is not suitable for direct coating, apply an appropriate primer, or a primer combined with sand, to serve as a repair material. After the repair has fully cured, apply primer to the entire area designated for coating. Contact Rugged Coatings for guidance in choosing the most suitable primer for your specific substrate.

COVERAGE RATE

One gallon (3.79 liters) of Polyurea 403 provides coverage of approximately 1,600 square feet at a thickness of 1 mil (0.025 mm) and may be applied in single or multiple passes to reach the required film thickness.

EQUIPMENT CLEAN-UP

Clean all equipment immediately using an environmentally acceptable solvent in accordance with local regulations. Once the material has cured or dried, removal may require mechanical methods. Ensure familiarity with the equipment and proper procedures for routine maintenance.

SPRAY MACHINE REQUIREMENTS

- Capacity minimum 20 lbs. per minute
- Static pressure 1800 – 2500psi
- Spraying pressure 2200psi
- Temperature for Part A and B & hose 150°F-160°F.
- Polyurea 403 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 403.

MIXING PROCEDURES

Thoroughly mix Polyurea 403 Part B (Resin) using air-powered mixing equipment until the material and color are fully uniform and free of streaks or inconsistencies.

SURFACE PREPARATION

Surface preparation is a critical initial step that must be completed before applying any coating. A coating's overall performance depends greatly on how well it bonds to the substrate. It is widely recognized that proper surface preparation is the single most important factor in achieving a successful coating system. Even minimal amounts of contaminants such as oil, grease, oxides, or other residues can interfere with adhesion and reduce coating effectiveness.

Ensure all surfaces are clean, dry, structurally sound, and properly profiled to promote adequate adhesion. Remove all dust, efflorescence, laitance, salts, curing compounds, dirt, oils, form-release agents, and any other contaminants. Conduct an adhesion test before beginning any coating application.

Metal and composite fiber substrates should be thoroughly cleaned and primed to achieve optimal adhesion, or lightly abraded by blasting to obtain a surface profile of 2–3 mils. For additional guidance, consult your representative. Concrete substrates must be cured for a minimum of 28 days prior to application and possess a compressive strength of at least 3,000 psi.

WARRANTY AND DISCLAIMER

Rugged Coatings warrants Polyurea 403 to be free from defects in materials and manufacturing. Under this warranty, we will provide, at no charge, a quantity of Polyurea 403 sufficient to replace any Polyurea 403 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.