



POLYUREA 605

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PRODUCT DESCRIPTION

Polyurea 605 is a fast-curing, two-component, spray-applied aliphatic elastomer used for durable protective and waterproofing applications. It provides excellent resistance to abrasion and impact and can be applied to vertical and horizontal surfaces without sagging. The material forms a seamless membrane with controlled thickness and adheres well to substrates such as concrete, metal, fiberglass, and geotextiles. Its rapid cure allows efficient single- or multi-coat application, and its moisture tolerance supports installation across a wide temperature range.

TECHNICAL DATA

	UNITS	VALUES	TEST METHOD
MIX RATIO BY VOLUME			
GEL TIME @ 150°F (66°C)	sec	7-10*	
TACK FREE TIME	sec	15-20*	
SHORE HARDNESS	Shore D	65D	ASTM D2240
TENSILE STRENGTH	psi	2950 psi	ASTM D412
ELONGATION	%	100% ± 20%	ASTM D412
TEAR RESISTANCE, DIE C	pli	590 pli	ASTM D624
QUV EXPOSURE (1000 HRS)	Delta E	1.03 (white sample)	ASTM D154
TABER ABRASION (CS-17)	mg/1000 cycles	12.5	ASTM D4060
PERCENT SOLIDS	%	100 (0 g/l VOCs)	ASTM D2697
VISCOSITY AT 72°		PART A 850 PART B 500	Brookfield
VOLATILE ORGANIC COMPOUNDS		0 LB/GALLON, 0 GRAMS/LITER	ASTM D2369-81

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 as a repair treatment. After the repair has fully cured, prime the entire area to be coated. Contact Rugged Coatings for guidance on selecting the most suitable primer for your substrate.

MIXING PROCEDURES

Do not dilute under any circumstances. Thoroughly mix Polyurea 605 (Resin) using air-powered tools until the color and consistency are uniform, taking care to avoid trapping air in the mixture.

COVERAGE RATE

One gallon (3.79 liters) of Polyurea 605 covers roughly 1,600 square feet at a thickness of 1 mil (0.025 mm). It can be applied in a single pass or multiple passes to reach the desired thickness.

STORAGE

Part-A and Part-B should be shipped and stored at temperatures between 65°F and 90°F (18°C – 32.2°C) with relative humidity at or below 50%, avoiding freezing conditions. If temperatures drop below 65°F (18°C), crystallization may occur. Without proper remediation to restore the original solution, rapid dimerization can follow, reducing the product's effectiveness.

SURFACE PREPARATION

When applying over concrete, ensure the concrete has cured for at least 28 days and achieves a minimum compressive strength of 3,000 psi and tensile strength of 220 psi.

Proper surface preparation is critical for coating performance, as adhesion depends on a clean, sound substrate. Even small amounts of contaminants—such as dust, efflorescence, laitance, salts, curing compounds, dirt, oil, or form release agents—can compromise adhesion and reduce coating effectiveness.

Concrete should be prepared by shot blasting to a CSP 4-6 profile. Steel surfaces should have a 4-6 mil profile. Grinding is allowed only in areas inaccessible to shot blasting equipment.

SPRAY MACHINE REQUIREMENTS

- Capacity minimum 20 lbs. per minute
- Static pressure 2200 – 2500psi
- Spraying pressure 2000 - 2300psi
- Pressure balance 100 variances desirable
- 300 psi variance maximum
- Temperatures preheaters & hose 140°F - 160°F.
- Polyurea 605 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 605.

EQUIPMENT CLEAN-UP

Clean equipment immediately using an environmentally safe solvent in accordance with local regulations. Once the material has cured or dried, it can only be removed mechanically. Be familiar with your equipment and follow recommended maintenance procedures.

APPLICATION

Choose the appropriate primer. Priming is required on all substrates except properly prepared steel. Only apply as much primer as can be coated the same day. Polyurea 605 must be applied using a plural-component, high-pressure, 1:1 ratio heated spray system. For best results, apply when air and substrate temperatures are between 32°F (0°C) and 104°F (40°C), at least 6°F (-14.4°C) above the dew point, with temperatures rising.

Before application, precondition both Part-A and Part-B to 75°F to 80°F (24°C to 27°C).

PACKAGING

Part-A (Isocyanate) and Part-B (Resin) are supplied in 55-gallon drums, with 52 gallons of material in each drum..

COLOR

Available colors: Black, White, Grey, and Neutral. Add color to Part-B only. Custom colors are available upon request..

WARRANTY AND DISCLAIMER

Rugged Coatings warrants Polyurea 605 to be free from defects in materials and manufacturing. Under this warranty, we will provide, at no charge, a quantity of Polyurea 605 sufficient to replace any Polyurea 605 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.