



# CITADEL® POLYUREA-3 WB

## DESCRIPTION AND USES

Citadel® Polyurea-3 WB is a High Solids premium water-based two-part high performance urethane coating which utilizes aliphatic urethane polymer technology. It provides excellent film hardness, chemical, abrasion and UV resistance. Polyurea-3 WB can be applied directly to many surfaces without the need of a primer, i.e., concrete, wood, aluminum and galvanized metal. The coating is widely used to provide a high gloss or matte finish to concrete floors, food & beverage and pharmaceutical facilities.

Recommended for interior and exterior environments including; cafeterias, clean rooms, healthcare facilities, manufacturing plants and warehouses. This product also has anti-graffiti barrier coat properties.

## PRODUCT FEATURES

- User friendly–Easy to mix two component system with a 60 minute pot life
- Excellent chemical, abrasion and UV resistance
- UV stable and non-yellowing: colors are available in a gloss finish, clear is available in gloss and matte finishes
- VOC compliant nationwide

## PRODUCTS

DESCRIPTION (3 Gallon Kit)	SKU
Polyurea-3 WB Matte Clear	10609A
Polyurea-3 WB Gloss Clear	10611A
Polyurea-3 WB Gloss Light Gray	356271
Polyurea-3 WB Gloss Dunes Tan	356272
Polyurea-3 WB Custom Clear	356273

## PRODUCT APPLICATION

### READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING PROJECT

#### CONCRETE REPAIR

All spalls and cracks must be chased out and repaired to ICRI standards using an appropriate patching material.

#### SURFACE PREPARATION

**NEW CONCRETE:** New concrete should be allowed to cure for a minimum of 28 days. The concrete must be structurally sound, dry, and free of grease, oils, dust, curing compounds and other coatings or contaminants. Surface laitance must be removed. Rising moisture vapor emission rate must not exceed 3 lb. per 1000 sq. ft. over a 24 hour period as measured by calcium chloride test method ASTM F-1869. The preferred method of surface preparation is to mechanically abrade the floor by diamond grinding to achieve a final 80–120 grit finish, reference profile CSP-2 according to ICRI.

## PRODUCT APPLICATION (cont.)

### SURFACE PREPARATION (cont.)

**PREVIOUSLY COATED:** Previously coated surfaces must be sound and in good condition. Smooth, hard, or glossy finishes should be scarified by sanding or sweep blasting to create a surface profile. Polyurea-3 WB is compatible with most coatings, but a test patch is suggested. Concrete must be visibly dry at time of application.

**WOOD:** Sand new wood to remove any surface contaminant and to lower grain. Previously finished wood should be sanded to provide good adhesion. Test patches are recommended.

**ANTI-GRAFFITI SYSTEM:** Follow appropriate surface preparation noted above. Apply two coats of Polyurea-3 WB Clear using a short nap premium 1/4–3/8" lint free roller. Graffiti "spray paint" can be removed with a rag saturated with xylene.

**ALUMINUM:** Remove all oil, grease or soap film with an alkaline cleaner such as TSP (tri-sodium phosphate).

### MIXING EQUIPMENT

Low speed drill and spiral mixing wand.

Important: Hand mixing will produce inconsistent results and is not an approved method.

### MIXING

Note: Before starting, ensure that the material, concrete surface, and the ambient air are all at 50-95°F. Mixing ratio is 3 part A to 1 part B.

Pre-mix both A and B sides prior to combining.

Add part "A" to the mixing container.

Add part "B" to the mixing container and mix for 60-90 seconds.

Mix only the amount of material that can be applied during the pot life (approximately 1 hour, depending on air/surface temperatures). Do not aerate the mix. Apply immediately.

**\*Option:** To help aid in flow and leveling of the product, 6-8 oz. of clean water may be added to each gallon.

### APPLICATION

Apply only when air, material and floor temperatures are between 30-90°F (-1-32°C) and surface temperature is at least 5°F (3°C) above the dew point. The relative humidity of the air should not be greater than 85%. Do not apply in direct sunlight or when temperature is rising. Colder environmental conditions can slow the cure of Polyurea-3 WB. Be sure the substrate is completely dry. Variability in these conditions during application may lead to surface defects. For application outside of this temperature range, contact Rust-Oleum Technical Service.



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**PRODUCT APPLICATION (cont.)**

**APPLICATION (cont.)**

Use a 3/8 inch, short nap roller for horizontal surfaces and for vertical surfaces. Apply light coats no more than 24 hours between coats.

**THINNING**

None required

**CLEAN-UP**

Clean Tools and application equipment immediately after use with active solvent like xylene (in SCAQMD use acetone only). Clean spills or drips while still wet with solvent. Dried product will require mechanical abrasion for removal.

**LIMITATIONS**

This product is not designed for immersion or any use where moisture can reach the underside of the coating. Do not apply to floors that have been treated with curing compounds (unless completely removed) or substrates that are less than 30 days old. Do not use on vinyl, asphalt, glazed tile, paving brick, quarry tile, Mexican tile or similar materials. Do not apply if surface temperature is below 50°F.

**PERFORMANCE CHARACTERISTICS**

**TENSILE STRENGTH**

METHOD: ASTM D638  
RESULT: 2715-2912 psi

**ABRASION RESISTANCE**

METHOD: ASTM D4060, CS 17 Wheel  
RESULT: 4mg loss

**WATER VAPOR TRANSMISSION**

METHOD: ASTM E96  
RESULT: 1.39 perms

**MONOLITHIC SURFACING**

METHOD: ASTM C722  
RESULT: PASS

**KONIG HARDNESS**

METHOD: ASTM D4366  
RESULT: 111

**IMPACT RESISTANCE (CS-17)**

METHOD: ASTM D2794  
RESULT: Pass, >160 inch/lb.

**CHEMICAL RESISTANCE**

CHEMICAL	RESULT
Acetone	Y
Animal Urine (fox)	Y
Antifreeze (Prestone®)	Y
Bleach (Clorox®)	Y
Brake Fluid	N
Calcium Chloride	Y
Cooking Oil (Peanut, Olive Canola)	Y
De-Icing Salts	Y
Detergents	Y
Gasoline	Y
Hydraulic Fluids (Tellus 46)	Y
Hydrochloric Acid 10%	Y
Hydrofluoric Acid 37%	Y
Isopropyl Alcohol	Y
MEK	Y
Motor Oil	Y
Mustard (Raye's®)	Y*
Natural Grain Spirits 190 Proof	Y
Phosphoric Acid 10%	Y
Skydrol 5	Y
Sodium Hydroxide 50% (Caustic Soda)	Y
Sulfuric Acid 10%	Y
Sulfuric Acid 37% (Battery Acid)	Y
Toluene	Y
Trisodium Phosphate	Y
Water	Y
Windshield Wiper Fluid	Y
Xylene	Y

**Chemical Resistance: Chart Key**

Y = Resistant

N = Not Recommended

\*Will stain unless immediately removed



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**PHYSICAL PROPERTIES**

		<b>POLYUREA-3 WB</b>
<b>Resin Type</b>		Water based urethane
<b>Weight*</b>	<b>Per Gallon</b>	9.0-10.18 lbs
	<b>Per Liter</b>	1.08-1.22 kg
<b>Solids*</b>	<b>By Weight</b>	57-67%
	<b>By Volume</b>	54-59%
<b>Volatile Organic Compounds*</b>		<100 g/l
<b>Recommended Wet Film Thickness (WFT) Per Coat</b>		3-5 mils
<b>Practical Coverage Rate</b>		300-500 sq.ft./gal. Coverage rate can vary depending on the texture and porosity of the concrete
<b>Mixing Ratio</b>		3 (base) : 1 (activator)
<b>Induction Period</b>		None
<b>Pot Life @ 70-80°F (21-27°C) &amp; 50% Relative Humidity</b>		60 minutes
<b>Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity</b>	<b>Tack Free</b>	6 hours
	<b>Vehicle Traffic</b>	5 days
	<b>Re-Coat</b>	Minimum 6 hours and Max 24 hours
<b>Shelf Life</b>		2 years
<b>Flash Point</b>		>200°F (93°C)
<b>CAUTION!</b>		Protect from freezing
<b>Safety Information</b>		See SDS

Calculated values are shown and may vary slightly from the actual manufactured material.

\*Activated material

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