



CITADEL

POLY-3 WB

DESCRIPTION AND USES

Citadel® Poly-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. Poly-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

SKU DESCRIPTION (3 Gallon Kit)

10609A	Matte Clear
10611A	Gloss Clear
356271	Gloss Light Gray
356272	Gloss Dunes Tan

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.

PRODUCT APPLICATION (cont.)

SURFACE PREPARATION (cont.)

NEW CONCRETE (cont.): 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.

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. Poly-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 Poly-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.

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



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PRODUCT APPLICATION (cont.)

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 Poly-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. Use a 3/8", 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

URETHANE	TECHNICAL DATA	CDL-04
 CITADEL	POLY-3 WB	

PHYSICAL PROPERTIES

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

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

*Activated material

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