



CITADEL® RG70

DESCRIPTION AND USES

Citadel® RG70 is a two component, polyaspartic polyurea coating. It dries quickly and provides rapid return to service. It is resistant to heat (temps up to 350°F), UV rays, and a variety of harsh chemicals, including salt, oil, and gasoline. RG70 is also flexible and allows for natural concrete movement without cracking or peeling, making this system ideal for either indoor or outdoor applications. RG70 can be used as a clear finish or tinted to finish color.

FEATURES AND BENEFITS

- VOC < 50 g/l, SCAQMD Approved
- Versatile – Coatings, Broadcast Floors, Chip Floors, Slurry/Broadcast
- Rapid Return to Service in 24 hours
- Outstanding Color retention in Gloss or Satin Finish
- Highly Chemical Resistant (for more information, see chart on page 2)
- Convenient 1:1 mixing ratio
- Designed for interior and exterior applications
- Meets USDA and FDA requirements for incidental food contact

PRODUCTS

SKU	DESCRIPTION
354206	Gloss Kit
254207	Satin Kit

PACKAGING

Each kit contains a 2 gal. container of Part A and a 2 gal. container of Part B. The yield is 4 gallons of activated material.

PRODUCT APPLICATION

READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING PROJECT

SURFACE PREPARATION

The concrete surface must be free of all dirt, grease, oil, fats, and other contamination (SSPC-SP1). Remove surface contamination by cleaning with Krud Kutter® Cleaner Degreaser, detergent, or other suitable cleaner. Rinse thoroughly with clean, fresh water and allowed to dry.

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. The RG70 is compatible with most coatings, but a test patch is suggested. Concrete must be visibly dry at time of application.

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 30-90°F. Mixing ratio is 1 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.

DO NOT THIN

TINTING

Add 16 ounces (1/2 quart) of Polyurea 844 Universal Tint to an activated gallon kit (Parts A and B) and stir for 3 minutes. Carefully monitor amount of colorant added to each gallon to ensure color is uniform. On large projects, make sure all colorant is from the same lot # or intermix all colorants. Tint is to be added in the field at the time of application.

APPLICATION EQUIPMENT

24" flat blade squeegee

18"-3/8" lint free roller

APPLICATION

Mix only what you can squeegee and back roll within 35-40 minutes (approximately 1 gallon of mixed material per crew of two applicators wearing spiked shoes). Do not aerate the mix.

Before starting, ensure that the material, concrete surface, and the ambient air are all at 30-90°F. Do not apply in direct sunlight or when temperature is rising. Wearing spiked shoes, immediately pour mixed RG70 on the floor in a long 8" to 12" wide stripe.

NOTE: Do not scrape the sides or bottom of the container. Use only the material that flows naturally out of the container. Also, do not turn the container upside down and leave on the floor to drain.



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PRODUCT APPLICATION (cont.)

NOTE (cont.): Doing so may result with unactivated material from the sidewall of the container being applied. This will cause soft spots in the coating. Use a rubber squeegee to spread the material out and achieve the 120 to 240 ft²/gal. spread rate, depending on the texture and porosity of the concrete. Back roll the material smooth using a 3/8" lint free roller with a phenolic core to smooth out the finish.

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.

PERFORMANCE CHARACTERISTICS

COMPRESSIVE STRENGTH

METHOD: ASTM C695
RESULT: @ 24 hours 6,700 psi
@ 7 days 7,950 psi

TENSILE STRENGTH

METHOD: ASTM D638
RESULT: 4500-5200 psi

BOND STRENGTH TO CONCRETE

METHOD: ASTM D4541
RESULT: 725 psi

TABER ABRASION

METHOD: ASTM 4060, CS 17
RESULT: 3 mg.

FLAMMABILITY

METHOD: ASTM D635
RESULT: Self-extinguishing

COEFFICIENT OF FRICTION

METHOD: ASTM D2047
RESULT:

KONIG HARDNESS

METHOD: ASTM D4366
RESULT: 137

ELONGATION

METHOD: ASTM D638
RESULT: 25-35%

WATER ABSORPTION

METHOD: ASTM D570
RESULT: (24 hours) <0.5%

MONOLITHIC SURFACING

METHOD: ASTM C722
RESULT: Pass

IMPACT RESISTANCE

METHOD: ASTM D2794
RESULT: Pass

CHEMICAL RESISTANCE

CHEMICAL	RESULT (77°F/25°C)
Acetic Acid 100%	C
Acetone	C
Ammonium Hydroxide 50%	RC
Benzene	C
Brine saturated H ₂ O	R
Chlorinated H ₂ O	R
Clorox(10%) H ₂ O	R
Diesel fuel	RC
Gasoline	RC
Gasoline/5% MTBE	RC
Gasoline/5% Methanol	RC
Hydrochloric Acid 20%	R
Hydrofluoric Acid 10%	NR
Hydraulic fluid (oil)	RC
Isopropyl Alcohol	R
Lactic Acid	RC
MEK	RC
Methanol	R
Methylene Chloride	C
Mineral Spirits	RC
Motor Oil	R
MTBE	C
Muriatic Acid 10%	R
NaCl/H ₂ O 10%	R
Nitric Acid 20%	NR
Phosphoric Acid 10%	R
Phosphoric Acid 50%	NR
Potassium Hydroxide 10%	R
Potassium Hydroxide 20%	R, Dis
Propylene Carbonate	RC
Skydrol	C
Sodium Hydroxide 25%	R
Sodium Hydroxide 50%	R, Dis
Sodium Hypchlorite 10%	R
Sodium Bicarbonate	R
Stearic Acid	R
Sugar/H ₂ O	R
Sulfuric Acid 10%	R
Sulfuric Acid >50%	RC
Toluene	R
1, 1,1-Trichlorethane	C
Trisodium Phosphate	R
Vinegar/H ₂ O 5%	R
Xylene	RC

Chemical Resistance: Chart Key

R=recommended/little or no visible damage
RC=recommended conditional/some effect, swelling or discoloration
C=Conditional/Cracking-wash within one hour of spillage to avoid affects
NR=Not recommended
Dis=discolorative



CITADEL® RG70

PHYSICAL PROPERTIES

		RG70
Resin Type		Polyaspartic Polyurea
Pigment Type		Varies depending on color
Solvents		Benzyl Alcohol
Weight*	Per Gallon	9.59 lbs.
	Per Liter	1.1 kg
Solids*	By Weight	70%
	By Volume	70%
Volatile Organic Compounds*		<50 g/l
Recommended Dry Film Thickness (DFT) Per Coat		4-8 mils
Practical Coverage (assume 15% material loss)		120-240 sq.ft./gal. Coverage rates will vary based on application method and surface texture.
Mixing Ratio		1:1
Pot Life @ 70-80°F (21-27°C) and 50% Relative Humidity		35-40 minutes
Re-Coat Window (Min./Max)		2 hours/24 hours
Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity	Foot Traffic	2-4 hours
	Vehicle Traffic	24 hours
	Full Cure**	7 days
Shelf Life		2 year
Flash Point		>200°F (93°C)
WARNING!		CAUSES NOSE, THROAT, EYE AND SKIN IRRITATION. CAUSES EYE AND SKIN BURNS. HARMFUL IF SWALLOWED. MAY CAUSE ASTHMA, SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES. FOR INDUSTRIAL OR COMMERCIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. SEE THE PRODUCT SAFETY DATA SHEET (SDS) AND LABEL WARNINGS FOR ADDITIONAL SAFETY INFORMATION.
Safety Information		For additional information, see SDS

* Activated material

**Coating achieves its full physical and chemical resistant properties.

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

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