CITADEL® RG-80X

DESCRIPTION AND USES

Citadel® RG-80x is a two component, high gloss, UV stable polyaspartic polyurea floor coating for use in industrial and commercial facilities and is designed to be used as a clear finish over broadcast floors. Suitable for both interior and exterior applications. RG-80x can be tinted to finish color with universal color packs.

PRODUCTS

SKU	DESCRIPTION
390089	Clear-Fast (4-gallon kit)
390090	Clear-Slow (4-gallon kit)
390091	Clear-Super Slow (4-gallon kit)
390093	Clear-Fast (10-gallon kit)
390094	Clear-Slow (10-gallon kit)
390095	Clear-Super Slow (10-gallon kit)

RECOMMENDED PRIMERS

- Polyurea-350
- SLE-100
- PLE-100
- Ultra-Hydro Stop*
- Ultra-Hydro Stop H2O*
- EP-55

*If there is a moisture issue with the floor, then it must be primed with one of the Hydro Stop Primers.

PRODUCT APPLICATION

READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING PROJECT

ACTIVATOR SELECTION

As weather changes so does the installation properties, working times and cure rates for all floor coatings; regardless of manufacturer. Citadel's 1 Day floor assortment is specially formulated to deliver optimal product performance over a broad temperature range. This allows installation of 1 Day floors throughout the year while providing best in class return to service. NOTE: Installation in cold temperatures may require additional cure times of 36-48 hours for vehicle traffic.

Use the chart to select the right product assortment for your project. Keep in mind, the temperature of the concrete surface is often different than the ambient temperature. Temperatures ranges should be consistent for ambient, material and substrate during application and cure. All coating products should be conditioned to match the temperature of the job site. Be sure to monitor the temperature of concrete surface and ambient conditions daily during your installation.

PRODUCT APPLICATION (cont.)

ACTIVATOR SELECTION (cont.)

1 Day Install Top Coats	Recommended Temp Range	Return to Service - Physical Properties**			
		Tack Free	Foot Traffic	Vehicle Traffic**	Recoat
Fast	0 - 50° F	1-2 hours	2-4 hours	24 hours	2-12 hours
Slow	50 - 90° F	1-2 hours	2-4 hours	24 hours	2-12 hours
Super Slow*	90 - 100° F	1-2 hours	2-4 hours	24 hours	2-12 hours

*Super Slow may require additional cure times of 36-48 hours for vehicle traffic
** Physical Properties are based on 72° F and 50% RH. Changes in these conditions may cause times to vary. Extreme cold temps will slow cure times.

SURFACE PREPARATION

The concrete surface must be free of all dirt, grease, oil, fats, and other contamination. Remove surface contamination by cleaning with Rust-Oleum® Professional 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. Concrete must be tested for relative humidity and or rising moisture vapor emission. Rates must not exceed 3 lb. per 1,000 sq. ft. over a 24-hour period as measured by calcium chloride test method ASTM F-1869 or RH in slab must not exceed 75% as tested per ASTM F2170. 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 CONCRETE: Previously coated concrete must be in good sound condition with the existing coating tightly adhering to the concrete. In addition to the aforementioned cleaning the existing coating must be abraded to dull the finish and produce a slight surface profile. Remove all sanding dust by vacuum.

MIXING

Both components should be preconditioned to a minimum of 50ºF (10ºC) prior to use. Thoroughly mix each component separately before combining. If only using part of a container, be sure to use a separate mixer blade for each component to avoid cross contamination.

Pour the Part A and Part B components together in a clean, dry five-gallon container and power mix for a minimum of two minutes. Do not entrain air into the mixing. Do not mix more material than can be applied in 20-25 minutes. If using less than a full container, combine the components using a mixing ratio of 1:1 by volume, Part A (Base) to Part B (Activator).

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PRODUCT APPLICATION (cont.)

TINTING (Clear)

Pre-mix Universal Tint Packs prior to adding into floor coatings. Hand mixing until uniform in appearance is acceptable. Add Universal Tint Packs at 8 oz. per gallon of mixed floor coating material and combine thoroughly via power mix to achieve uniform colorant dispersal. **NOTE:** Some colors, including safety colors, may require additional coats if desired coverage is not achieved in the first application. **NOT FOR USE IN WATER BASED COATINGS**

If there are any questions on the tint process of this product, please consult our technical service department.

EQUIPMENT RECOMMENDATIONS

SQUEEGEE: Use a high-quality notched rubber squeegee.
ROLLER: Use a high quality ⅜ inch lint-free roller with a phenolic core.
BRUSH: Use a disposable natural fiber chip brush, 2-4 inch wide for cut in work.

APPLICATION

Apply only when air, material and floor temperatures are between 30-90°F (-1-32°C) and the surface temperature is at least 5°F (3°C) above the dew point and RH less than 75%. Do not apply in direct sunlight or when temperature is rising. Colder environmental conditions can slow the cure of RG-80. Variability in these conditions during application may lead to surface defects. For application outside of this temperature range, please contact Rust-Oleum Technical Service.

Immediately after mixing, pour the material onto the floor in a long, 8-12-inch-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. 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 100-200 sq. ft./gal. spread rate. Back roll the material smooth using a 3/8" lint free roller with a phenolic core to smooth out the finish.

NOTE: Coverage rate can vary depending on the broadcast, texture, and/or the porosity of the concrete. Recommended spread rate over full chip or quartz broadcast is 125-150 sq.ft./gallon. Solid color spread rate is 100-200 sq.ft./gallon.

THINNING: Not normally required. Thin with MEK or acetone if needed, no more than 10%.

CLEANUP: Acetone.

PERFORMANCE CHARACTERISTICS

TENSILE STRENGTH

METHOD: ASTM D412
TYPICAL VALUE: 6,000 psi

COMPRESSIVE STRENGTH

METHOD: ASTM C695
TYPICAL VALUE: 9,400 psi

ELONGATION

METHOD: ASTM D412
TYPICAL VALUE: 100

FILM HARDNESS, SHORE D

METHOD: ASTM D2240
TYPICAL VALUE: 78

KÖNIG HARDNESS

METHOD: ASTM D4366
TYPICAL VALUE (RG-80 Fast): 24 Hours - 36
7 Days - 101

GLOSS

METHOD: ASTM D523 @60°
TYPICAL VALUE: 90+

TABER ABRASION

METHOD: ASTM 4060, CS 17, 1,000-gram load
TYPICAL VALUE: Loss/1000 cycles = 28 mg

This coating complies with USDA FSIS regulatory sanitation performance standards for food establishment facilities. This coating is impervious to moisture and easily cleaned and sanitized.

CITADEL® RG-80X

CHEMICAL RESISTANCE

CHEMICAL	RESULT
Acetic Acid 100%	C
Acetone	C
Ammonium Hydroxide 50%	RC
Benzene	C
Brine saturated H_2O	R
Chlorinated H_2O	R
Clorox H_2O	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_2O 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 Hypochlorite 10%	R
Sodium Bicarbonate	R
Stearic Acid	R
Sugar/ H_2O	R
Sulfuric Acid 10%	R
Sulfuric Acid >50%	RC
Toluene	R
1, 1,1-Trichlorethane	C
Trisodium Phosphate	R
Vinegar/ H_2O 5%	R
H_2O	R
H_2O 14 days at 82° C	RC
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

POLYUREA	TECHNICAL DATA	CDL-10

CITADEL® RG-80X

PHYSICAL PROPERTIES

		RG-80X
Resin Type		Polyaspartic Polyurea
Weight	**Per Gallon**	9.0 lbs.
	Per Liter	1.1 kg/l
Solids by Volume		80%
Volatile Organic Compounds		<50 g/l**
Mixing Ratio		1:1 (Part A to Part B)
Induction Time		None required
Pot Life		20-25 minutes
Recommended Dry Film Thickness (DFT) Per Coat		6-12 mils
Recommended Wet Film Thickness (WFT) Per Coat		8-16 mils
Practical Coverage		100-200 sq. ft./gal. Coverage rate can vary depending on the broadcast, texture and porosity of the concrete
Dry Times @ 72ºF and 50% Relative Humidity†	**Tack Free**	1-2 hours
	Dry Hard	2-4 hours and 24 hours for vehicle traffic NOTE: RG80x Super Slow may require additional cure times of 36-48 hours for vehicle traffic.
	Recoat	2-12 hours*
Shelf Life		12 months
Safety Information		For additional information, see SDS

Calculated values are shown and may vary slightly from the actual manufactured material.
† Physical properties are based on these environmental conditions. Changes in these conditions may cause times to vary. Extreme cold temperatures may slow cure times.
* If 12 hour recoat time has elapsed, the coating must be properly abraded and cleaned prior to recoating.
** Calculated Applied VOC

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