



**Generic
Quartz Polyurea Coating
Double Lift Floor Systems
SPEC-25-010225.10
Fluid Applied Flooring
096700
January 15th, 2025**



SECTION 09 67 00
FLUID APPLIED RESINOUS FLOORING

**Generic
Quartz Polyurea Coating
Double Lift Floor Systems
SPEC-25-010225.10**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. High-performance coatings including the following:
 - 1. Cleaners and patch/repair specialty products.
 - 2. Citadel Floor Finishing Systems.

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 07 90 00 - Joint Sealants.

1.3 REFERENCES

- A. ASTM F 1869: Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- B. ASTM F 2170: Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using *in situ* Probes.
- C. SSPC: The Society for Protective Coatings:
 - 1. SSPC-SP 1 - Solvent Cleaning.
 - 2. SSPC-SP 2 - Hand Tool Cleaning.
 - 3. SSPC-SP 3 - Power Tool Cleaning.
 - 4. SSPC-SP 13 / NACE No. 6 Surface Preparation for Concrete.
- D. ICRI: International Concrete Repair Institute
 - 1. CSP Concrete Surface Preparation Standards
- E. Safety Data Sheets: Per manufacturer's SDS for specific VOCs (calculated per 40 CFR 59.406). VOCs may vary by base and sheen.

1.4 DEFINITIONS

- A. LEED as used in this Section refers to Leadership in Energy and Environmental Design. Products listed meet LEED criteria for environmentally safe interior primers, paints and coatings.

- B. VOC as used in this Section refers to Volatile Organic Compounds found in primers, paints, sealers and stains. The level of VOCs appears after each product listed in the Schedule in grams per liter (g/L).
- C. Rust-Oleum Concrete Saver Systems are referred to as CS. Rust-Oleum Concrete Protection Systems are referred to as CPS. Rust-Oleum Seal-Krete High Performance Systems are referred to as SKHP. Rust-Oleum Citadel Floor Finishing Systems are referred to as CFFS.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Coordinate with Section 01 30 00 - Administrative Requirements.
- C. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Submit descriptive data and specific recommendations for mixing, application, curing including any precautions of special handling instructions required to comply with the Occupational Safety and Health Act.
 - 2. Prepare instructions and recommendations.
 - 3. Submit storage and handling requirements and recommendations.
- D. Selection Samples: For each finish product specified, submit maximum of three samples, 6 inches by 6 inches for each color and type of coating available from manufacturer's full range.
- E. Verification Samples: For each finish product specified, submit maximum of three samples, 6 inches by 6 inches for each color and type of coating as specified.
- F. Maintenance Literature: Submit two copies of manufacturer's maintenance recommendations.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Materials used in the floor surfacing shall be the products of a single manufacturer.
- B. Installer Qualifications:
 - 1. Installer shall be acceptable to Architect and manufacturer.
 - 2. Installation shall be performed by an applicator with a minimum of 3 years' experience in work of similar nature and scope. Installer shall be approved by the manufacturer of the floor surfacing materials. The Contractor shall furnish a written statement from the manufacturer that the installer is acceptable.
 - 3. Contractor shall have proven experience with specified system.
- C. Certification:
 - 1. Manufacturer shall furnish statement attesting that materials meet specification requirements.
 - 2. Manufacturer shall furnish properly labeled material and Technical/Safety Data Sheets which comply with current state and federal requirements.
- D. Pre-Construction Meeting:
 - 1. Pre-job meeting between Contractor, Architect, and installer shall be held to discuss concrete substrate, location of joints and/or saw cuts to minimize sub-floor cracking.
- E. Mock-Up: Provide an installed mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.

2. Mock-up size shall not be less than 50 square feet.
3. Acceptable mock-up to be standard of quality for installed work.
4. Unacceptable installed work to be removed and replaced or refinished until acceptable.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information:
 1. Product name and type (description).
 2. Application and use instructions.
 3. Surface preparation.
 4. VOC content.
 5. Environmental issues.
 6. Batch date.
 7. Color number.
- B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
- C. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.
- D. Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

1.8 PROJECT CONDITIONS

- A. Maintain the ambient room and floor temperature at 60°F (15°C) or above for a period extending from 72 hours before or per manufacturer's technical data sheet, during and after floor installation. Concrete to receive surfacing shall have cured for at least 28 days and be free of all curing compounds.
- B. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- C. When using polyureas or moisture cured urethane products, pay special attention to humidity levels. At higher humidity levels, these products will have a shorter working time.

1.9 WARRANTY

- A. The technical data and suggestions of use are correct to the best of our knowledge and offered in good faith. The statements of this specification do not constitute a warranty, expressed, or implied, as to the performance of these products. As conditions and use of our materials are beyond our control, we can guarantee these products only to conform to our standards of quality, and our liability, if any, will be limited to replacement of defective materials. All technical information is subject to change without notice.
- B. Special written project warranties may be issued on a request basis at the discretion of the Rust-Oleum Corporation Technical and Legal Departments and would not be contained within this specification document.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Rust-Oleum®, which is located at: 11 Hawthorn Pkwy.; Vernon

Hills, IL 60061; Toll Free Tel: 800-323-3584; Tel: 847-367-7700; Fax: 847-816-2330; Web: <https://www.rustoleum.com>.

- B. Specification questions should be directed to Rust-Oleum Technical Service Department at technicalservice@rustoleum.com.
- C. Distribution and product questions should be directed to Rust-Oleum Industrial Flooring Specialist David Haskell at david.haskell@rustoleum.com or Rust-Oleum Architectural Specialist Eric Mitchell at emitchell@rustoleum.com. **FLORIDA CONTACT:** Floor Coating Source, 239-424-8692, info@floorcoatingsource.com
- D. Substitutions: Not permitted.

2.2 CLEANERS AND PATCH/REPAIR SPECIALTY PRODUCTS

- A. Cleaners:
 - 1. Rust-Oleum Professional Cleaner & Degreaser.
 - 2. Rust-Oleum Professional Neutral Floor Cleaner.
 - 3. Rust-Oleum Professional Low Foam Cleaner.
- B. Patch/Repair Products:
 - 1. Rust-Oleum CFFS Fast Patch.
 - 2. Rust-Oleum CFFS Fortification Formula.
 - 3. Rust-Oleum CFFS PolyFlex 93 Joint Filler.
- C. Moisture Mitigating Vapor Barriers (Optional if required by testing):
 - 1. Rust-Oleum CFFS Ultra Hydro Stop 100% Solids Epoxy.
 - a. Use for up to 25 lbs. MVT.
 - b. Applied at 100 square feet per gallon/16 mils DFT.
 - 2. Rust-Oleum CFFS UHS H2O WB MVT Epoxy Primer.
 - a. Use for up to 12 lbs. MVT
 - b. Applied at 250 square feet per gallon/3 mils DFT per coat. Apply two coats.

2.3 CITADEL FLOOR FINISHING SYSTEMS (CFFS)

A. **Decorative Quartz Double Lift Floor System**

- 1. Surface Prep: Clean and abrade per ICRI CSP 2 or 3 to provide proper profile for adhesion.
- 2. Base Coat: **R-O CFFS Poly 350 Polyurea Base Coat** pigmented and applied at approximately 100 square feet per gallon/16 mils DFT. per manufacturer's TDS. Broadcast Decorative Quartz to full rejection. Sweep and vacuum excess after dry.
- 3. Intermediate Coat:
Preferred: R-O CFFS Poly 350 Polyurea Clear applied at approximately 100 square feet per gallon/16 mils DFT. per manufacturer's TDS. Broadcast Decorative Quartz to full rejection. Sweep and vacuum excess after dry.
Optional: (UV Durable): R-O CFFS RG-80X or UL-80 or ET-80 Polyaspartic Coating Clear applied at approximately 100 square feet per gallon/12 mils DFT per manufacturer's TDS. Broadcast Decorative Quartz to full rejection. Sweep and vacuum excess after dry.
- 4. Grout Coat:
Preferred: R-O CFFS RG-80X Polyaspartic Coating Clear
Optional: UL-80 or ET-80 Polyaspartic Coating Clear applied at approximately 100-120 square feet per gallon/10-12 mils DFT. per manufacturer's TDS.
- 5. Glaze Coat:
Preferred: R-O CFFS RG-80X Polyaspartic Coating Clear
Optional: UL-80 or ET-80 Polyaspartic Coating Clear applied at approximately 100-120 square feet per gallon/10-12 mils DFT. per manufacturer's TDS.
- 6. Owner to approve color.

3.1 EXAMINATION

- A. The Contractor shall review the product manufacturer's special instructions for surface preparation, application, temperature, re-coat times, and product limitations.
- B. The Contractor shall review product health and safety precautions listed by the manufacturer.
- C. The Contractor shall be responsible for enforcing on site health and safety requirements associated with the Work.
- D. Ensure that surfaces to receive coating are dry immediately prior to application.
- E. Ensure that moisture-retaining substrates to receive coating have moisture content within tolerances allowed by coating manufacturer.
- F. Examine areas to receive coatings for:
 - 1. Concrete surfaces shall be in sound condition and properly prepared prior to flooring system installation.
 - 2. Defects in existing work that affect proper execution of coating work.
 - 3. Deviations beyond allowable tolerances for the concrete slab work.
- G. Correct conditions that could impair performance or appearance of coatings in accordance with specified surface preparation procedures before proceeding with coating application.
- H. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 SURFACE PREPARATION

- A. All cleaning and surface preparations specified herein are minimums. Prepare substrate to receive coating in accordance with manufacturer's recommendations.
- B. All surfaces to be coated shall be free of cracks, pits, fins, projections, or other imperfections that would interfere with the formation of a uniform, unbroken coating film. Honor expansion joints or dynamic, moving joints/cracks.
- C. Substrate shall be free of dirt, waxes, curing agents, and other foreign materials prior to mechanical surface preparation. Clean area with **Rust-Oleum Professional Concentrated Cleaner & Degreaser or Rust-Oleum Professional Low Foam Cleaner** and power wash to remove all contaminants.
- D. New concrete shall have cured for a minimum 30 days prior to coating application. If a cure and seal agent was added to the concrete or applied after initial cure, the concrete must be abrasive blast cleaned or mechanically abraded to remove the sealer and expose fresh concrete.
- E. Acceptable Substrates:
 - 1. Level tolerance: Concrete sub-floor shall be level with a maximum variation from level of 1/4 inch (6 mm) in 10 feet (3048 mm). Any irregularity of the surface requiring patching and/or leveling shall be done using material approved by the manufacturer.
 - 2. Concrete floor shall have a steel trowel finish.
 - 3. Concrete shall be cured a minimum of 28 days. No curing agents shall be used in areas to receive coating.
 - 4. Concrete slab shall have an efficient moisture barrier of minimum 10 mils (.2540 mm) placed directly under the concrete slab. Do not use vapor barrier manufactured with recycled content. Testing shall be done to verify that the moisture vapor emission rate of the slab does not exceed that as recommended by the manufacturer at time of

installation of the epoxy coating flooring. Moisture vapor emission and moisture content testing shall conform with the requirements of ASTM F 1869 (Calcium Chloride Test) and ASTM F 2170 (Relative Humidity Probe Test). If test results show excessive levels of moisture content or vapor emission rate above that recommended by the manufacturer, apply manufacturer's recommended moisture vapor emission control material.

5. Saw cutting of control joints shall be done between 12 and 24 hours after placement of the structural concrete.

- F. Concrete, SSPC-SP13 or NACE 6: This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems. The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.
- G. Concrete surfaces shall be mechanically abraded, or abrasive blast cleaned to remove all laitance to provide a uniform surface profile with a profile depth recommended by the fluid applied resinous system selected per ICRI CSP Standards. **The ICRI CSP Level required for this project is CSP-2 to 3.** Contact Manufacturer's technical service department for specific surface preparation questions.
- H. The coating contractor is to examine the substrate to determine if it is in satisfactory condition to receive the specified floor system. Obtain coating contractor's written report listing conditions detrimental to performance of work in this specification. Do not proceed with the application of specified floor coating until unsatisfactory conditions have been corrected.

3.3 MIXING AND THINNING

- A. Mixing:
 1. The base component and activator must be combined with power mixing. Hand mixing is not adequate.
 2. Scrape out the container of the activator to transfer as much material as possible.
 3. Use a suitable mixing blade which will not entrain air. Mix at 500-750 RPM for 1-3 minutes.
 4. Application must begin as soon as the material has been completely mixed.
- B. Thinning: Thinning is not required. Do not thin.

3.4 APPLICATION

- A. Weather Conditions:
 1. Apply when air and surface temperatures are between 60-80°F (15-27°C) and surface temperature is at least 5°F (3°C) above the dew point.
 2. The relative humidity should not be greater than 85 percent.
- B. Coating Application:
 1. Do not attempt to work out of the container. Immediately after mixing material, pour out the activated material in a long thin stripe across the top of the work section of floor. Use only the material that flows naturally out of the container.
 2. Do not scrape out the container of activated material or turn buckets upside down on floor to drain. Doing so may result with transfer of un-activated material to the floor which will result with soft spots in the coating.
 3. Install in accordance with manufacturer's instructions.

4. Locate all flexible joints required.
5. Provide accessories necessary for complete installation.

C. Protection of Surfaces:

1. The Coating Contractor shall be responsible for protecting all adjacent surfaces from spills, drips, or any other form of coating damage.
2. The coating contractor and its subcontractors shall be responsible for removing spots or repairing damaged surfaces to the satisfaction of the Architect.

3.5 CLEAN-UP

- A. Clean-up shall be done to remove all spills, drips, overspray, or other unwanted coating from all surfaces not intended to be coated.
- B. All used rags, brushes, roller covers, and other application related materials shall be removed from the work site and disposed in a proper manner and in accordance with local waste regulations.
- C. All equipment, staging, ladders, and other contractor materials brought onto the jobsite by the contractor shall be removed at the conclusion of the job in a timely manner.

3.6 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.
- C. Standard maintenance includes a proper cleaning schedule with Rust-Oleum Professional Cleaners or similar approved cleaning product on a routine basis. Please refer to the Care & Maintenance Guide for direction.

END OF SECTION



TECHNICAL DATA

CDL-18

CITADEL®

ULTRA-HYDRO STOP H2O PRIMER

DESCRIPTION AND USES

Ultra-Hydro Stop H2O Primer is a three component, water-based, 50% solids, epoxy primer used to remedy concrete floors with high moisture levels before the application of finish coatings. Capable of holding back up to 12 lbs. of MVT (Moisture Vapor Transmission) with a two coat application, this primer has excellent adhesion to moisture laden concrete slabs. Ultra-Hydro Stop H2O Primer can be applied to concrete as early as 48 hours after placement, reducing job-site downtime and delays in production.

PRODUCT

SKU	DESCRIPTION (Clear)
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10302	1.5 Gallon Kit
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NOTE: Combined components and the required additional water will yield 1 ½ gallons.

RECOMMENDED TOPCOAT

Any epoxy, polyurethane, or polyurea floor coating.

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. Remove surface contamination by cleaning with Krud Kutter® Cleaner Degreaser, detergent, or other suitable cleaner. Rinse thoroughly with clean, fresh water. Squeegee away excess rinse water. The Ultra-Hydro Stop H2O Primer can be applied to damp concrete, but not a wet surface. Place your hand flat on the surface. If any water is transferred to your hand, the surface is considered to be wet.

NEW, UNCOATED CONCRETE: In addition to the aforementioned cleaning, the concrete must also be free of any sealers or silicate treatments that may have been applied after finishing of the concrete. Removal of sealers or silicate treatments will require cleaning with mechanical abrasion.

Etch concrete with 108 Cleaning & Etching Solution. Rinse thoroughly and immediately. Very dense concrete may require abrasive blasting or diamond grinding to create surface profile.

OLD OR PREVIOUSLY COATED CONCRETE: In addition to the aforementioned cleaning the concrete must be in good, sound condition. All previous coating must be removed by mechanical abrasion.

MIXING

Hand mixing is not adequate. The components must be combined using a power mixer. Mix at 500-750 rpm. Do not over mix or use higher speeds. This can introduce air into the coating causing small bubbles in the finish.

Combine the entire contents of Part B into the two gallon container of Part A and mix for 2-3 minutes.

PRODUCT APPLICATION (cont.)

MIXING (cont.)

Continue power mixing and slowly add 64 fl. Oz. of clean fresh water and continue to mix until a uniform mixture is achieved. Material is ready to use. No induction time is required.

NOTE: There is a fill line marked on the two gallon container which indicates the level of the total activated material once the 64 fl. Oz. of water has been added.

DO NOT try to mix a partial kit. The components are premeasured and rationed for the additional water.

EQUIPMENT RECOMMENDATIONS

SQUEEGEE: Use a high quality ¼ inch V notched rubber squeegee.

ROLLER: Use a high quality ¾ 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 60-80°F (15.5-27°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 Ultra-Hydro Stop H2O Primer. 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, please contact Rust-Oleum Technical Service. One activated gallon of Ultra-Hydro Stop H2O Primer will cover 250 square feet. The full 1½ gallon kit will cover 375 square feet. This spread rate must be honored to ensure the primer properly performs.

Once mixed, pour the primer onto the floor in a long 8 to 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 ¼ inch V notched squeegee to spread the material out and achieve the 250 sq. ft./ gal spread rate. Roll out the material smooth using a ¾" lint free roller with a phenolic core.

Ultra-Hydro Stop H2O Primer should be allowed to flow down into saw cuts, but not allowed to fill the saw cut. Do not allow the material to pool.

One coat of Ultra-Hydro Stop H2O Primer will block up to 6 lbs. of MVT. Two coats will block up to 12 lbs.

THINNING: Not required

CLEAN-UP: Acetone

	TECHNICAL DATA	CDL-18
	CITADEL® ULTRA-HYDRO STOP H2O PRIMER	

PHYSICAL PROPERTIES

ULTRA-HYDRO STOP H2O PRIMER		
Resin Type		Mannich Base Adduct Converted Epoxy
Weight*	Per Gallon	8.9 lbs.
	Per Liter	1.1 kg/l
Solids by Volume*		50%
Volatile Organic Compounds*		0 g/l
Induction Time		None required
Working Time		1 hour @ 77°F (25°C)
Pot Life		None. Pour out all material at the end of the induction time
Recommended Wet Film Thickness (WFT) Per Coat		6 mils
Recommended Dry Film Thickness (DFT) Per Coat		3 mils
Practical Coverage		250 sq. ft./gal. Coverage rate can vary depending on the texture and porosity of the concrete
Recoat/Topcoat		5-24 hours. Scuff sanding is required if greater than 24 hours
Shelf Life		5 years
Safety Information		For additional information see SDS

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

*Activated material

†Immediately following mixing, pour the entire material onto the floor in a long, thin stripe. Do not try to work out of a pan or container, as the build-up of heat could shorten the pot life and create a hazardous condition.

The technical data and suggestions for use contained herein are correct to the best of our knowledge, and offered in good faith. The statements of this literature do not constitute a warranty, express, or implied, as to the performance of these products. As conditions and use of our materials are beyond our control, we can guarantee these products only to conform to our standards of quality, and our liability, if any, will be limited to replacement of defective materials. All technical information is subject to change without notice.



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Form: ARJ-2107
Rev.: 011425



CITADEL®

ULTRA-HYDRO STOP PRIMER

DESCRIPTION AND USES

Ultra-Hydro Stop Primer is a versatile moisture vapor barrier ideal for use on damp and green concrete floors. It is the perfect solution on moisture laden concrete surfaces for the installation of most resinous coatings and protects moisture sensitive flooring. Ultra-Hydro Stop Primer is two component, 100% solids epoxy primer that is easy to install, self-leveling and fast setting. It provides excellent adhesion and is capable of holding back up to 25 lbs. of moisture vapor transmission, (MVT). Available in Clear, Dunes Tan and Light Grey. The pre-tinted colors can be used as broadcast coats to save time and money.

PRODUCT FEATURES AND BENEFITS

- Compliant with all state and federal VOC regulations
- Typical one coat application
- Excellent adhesion to moisture laden slabs
- Resistant to high PH
- Meets ASTM F3010 standard requirements

PRODUCTS

SKU	DESCRIPTION
10301B	Clear 5 Gallon Kit
359081	Dunes Tan 5 Gallon Kit
359082	Light Gray 5 Gallon Kit

RECOMMENDED TOPCOATS

Contact Rust-Oleum Technical Service Department for approved systems and more detailed information.

PRODUCT APPLICATION

READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING PROJECT

SURFACE PREPARATION

New concrete must be allowed to cure for a minimum of 14 days before application of the Ultra-Hydro Stop Primer. All concrete surfaces must be free of all dirt, grease, oil, fats, and other contamination. Remove surface contamination by cleaning with Krud Kutter® PRO Cleaner/Degreaser, detergent, or other suitable cleaner.

After the concrete surface has been cleaned and visibly dry at the time of application, the concrete must be further prepared. The concrete surface texture must be comparable to ICRI CSP Level 3 for moderate environments or Level 5 for severe environments. Contact Rust-Oleum Technical Service Department for more detailed information.

PRODUCT APPLICATION (cont.)

SURFACE PREPARATION (cont.)

CONCRETE REPAIR

All spalls and cracks must be chased out and repaired to ICRI standards using Citadel® Concrete Repair Compound. For floors with very high moisture levels, cracks should be repaired with a mix of Ultra-Hydro Stop Primer and Cab-O-Sil® fumed silica to create a paste and applied by trowel or putty knife.

MIXING

Both components and environment should be preconditioned to a minimum of 60°F (15°C) prior to use. Hand mixing is not adequate. You must combine the base and activator by power mixing using either a 3" Jiffler Mixer or Hanson Plunge Mixer. Mix at 500-750 rpm for 1-3 minutes. Do not over mix or use higher speeds. This can introduce air into the coating causing small bubbles in the finish.

Start mixing the Base component in the short filled 5- gallon pail then add in the two gallons of Activator while maintaining mixing. It is very important to transfer as much activator as possible. Mix the two components together for 1-3 minutes being careful to not pull air into the mixture. Do not mix more material than what can be applied within 25 minutes of mixing.

If mixing less than the premeasured amounts, mix each component separately before accurately measuring out material. Use a 3:2 (base to activator) by volume mixing ratio and mix thoroughly.

TINTING (Clear)

Pre-mix Universal Tint Packs prior to adding into floor coatings. 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

EQUIPMENT RECOMMENDATIONS

SQUEEGEE: Use a high quality notched rubber squeegee.

ROLLER: Use a high quality $\frac{3}{8}$ inch lint-free roller with a phenolic core.

BRUSH: Use a disposable natural fiber chip brush, 2-4 inch wide for cut in work.

	TECHNICAL DATA	CDL-13
	CITADEL® ULTRA-HYDRO STOP PRIMER	

PRODUCT APPLICATION (cont.)

APPLICATION

Apply only when air, material and floor temperatures are between 60-80°F (15-27°C) and surface temperature is at least 5°F (3°C) above the dew point. Do not apply in direct Sunlight or when temperature is rising. Immediately after mixing, pour the material onto the floor in a long, 8- to 12-inch-wide stripe.

Ultra-Hydro Stop Primer is to be applied at a minimum thickness of 16 mils. Ultra-Hydro Stop Primer when applied at a minimum of 16 mils thickness, without tinting or broadcasting into it, will reduce vapor emission rate up to 25 lbs./1,000 sq. ft./24 hour and maximum RH of 99%. To ensure proper coverage, periodically check mil thickness using a wet film thickness gauge. Ultra-Hydro Stop Primer that is tinted or broadcast into (i.e., chips, quartz, silica, etc.) will not have the same moisture blocking properties. Contact Rust-Oleum Technical Service Department for more information.

NOTE: Do not try to work out of a pan or container, as the build-up of heat could shorten the pot life and create a hazardous condition. 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 80-100 sq. ft./gal. spread rate. Back roll the material smooth using a $\frac{3}{8}$ " lint free roller with a phenolic core to smooth out the finish. If needed, a spiked roller can be used to release any entrapped air in the coating.

Ultra-Hydro Stop Primer should be allowed to flow down into saw cuts, but not allowed to fill the saw cut. Allow to cure for a minimum of 24 hours before the placement of backer rod and a suitable polyurethane sealant. All expansion joints must be honored.

COVERAGE

One activated gallon of Ultra-Hydro Stop Primer will cover 80-100 square feet. The full 5-gallon kit will cover 400-500 square feet. This spread rate must be honored to ensure the primer properly performs.

THINNING: Not required

CLEAN-UP: Acetone

PERFORMANCE CHARACTERISTICS

COMPRESSIVE STRENGTH

METHOD: ASTM D695
TYPICAL VALUE: 15,225 psi

TENSILE STRENGTH

METHOD: ASTM D638
TYPICAL VALUE: 10,000 psi

FILM HARDNESS, SHORE D

METHOD: ASTM D2240
TYPICAL VALUE: 85

FLEXURAL STRENGTH

METHOD: ASTM D790 @ 2 hours
TYPICAL VALUE: 16,100 psi

PERMEANCE

METHOD: ASTM E96
TYPICAL VALUE: 0.09 perms (grains/h/sq. ft./in. Hg)

	TECHNICAL DATA	CDL-13
	CITADEL® ULTRA-HYDRO STOP PRIMER	

PHYSICAL PROPERTIES

		ULTRA-HYDRO STOP PRIMER
Resin Type		Amidoamine Converted Epoxy
Weight*	Per Gallon	9.1 lbs.
	Per Liter	1.1 kg/l
Solids by Volume		100%
Volatile Organic Compounds		0 g/l
Mixing Ratio		3:2 (Base to Activator by volume)
Induction Time		None required
Working Time		25 minutes @ 77°F (25°C)
Recommended Dry Film Thickness (DFT) Per Coat		16 mils
Practical Coverage		100 sq. ft./gal. Coverage rate can vary depending on the texture and porosity of the concrete
Recoat/Topcoat		12-14 hours. Scuff sanding is required if greater than 24 hours
Shelf Life		5 years
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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www.citadelfloors.com

Form: ARJ-2098
Rev.: 011425



CITADEL® POLYUREA-350

DESCRIPTION AND USES

Citadel Polyurea-350 is a two-component, 98% solids, VOC compliant Polyurea that was developed as a primer/basecoat for a variety of coating systems. This coating provides exceptional adhesion to a large number of substrates and performs well in a wide range of temperatures and climate conditions. Extended working time makes it a great choice for both residential and commercial applications. Patent-Pending Adjustable Cure Rate Technology™ simplifies installations in all temperatures by maintaining consistent cure times and material pot life.

PRODUCTS

SKU	DESCRIPTION
390071	Light Gray-Summer (3-gallon kit)
390072	Light Gray-Winter (3-gallon kit)
390073	Light Gray-Arctic (3-gallon kit)
390074	Dunes Tan-Summer (3-gallon kit)
390075	Dunes Tan-Winter (3-gallon kit)
390076	Dunes Tan-Arctic (3-gallon kit)
390077	Clear-Summer (3-gallon kit)
390078	Clear-Winter (3-gallon kit)
390079	Clear-Arctic (3-gallon kit)
390080	Light Gray-Summer (15-gallon kit)
390081	Light Gray-Winter (15-gallon kit)
390082	Light Gray-Arctic (15-gallon kit)
390083	Dunes Tan-Summer (15-gallon kit)
390084	Dunes Tan-Winter (15-gallon kit)
390085	Dunes Tan-Arctic (15-gallon kit)
390086	Clear-Summer (15-gallon kit)
390087	Clear-Winter (15-gallon kit)
390088	Clear-Arctic (15-gallon kit)

RECOMMENDED TOPCOATS

- SLE-100
- RG-70
- RG-80x
- UL-80
- Poly-1 HD
- Poly-3 WB

PRODUCT APPLICATION

READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING PROJECT

SURFACE PREPARATION

NEW CONCRETE/PREVIOUSLY COATED 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 (SSPC-SP1). Remove oil, dirt, grease, and other chemical contaminants by cleaning with Krud Kutter® PRO Cleaner Degreaser, detergent, or other suitable cleaner. Rinse with water. 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.)

The application area must be completely free of sealers, oils, dirt, paint, alkali, penetrating sealers, or any foreign materials that would prevent Polyurea-350 from penetrating the concrete surface. The recommended substrate should have a minimum concrete surface profile (CSP) of 2-3 in accordance with the ICRI Guideline No. 03732. Contact ICRI at www.ICRI.org for more information on these surface profiles. Surface must be dry prior to application of Polyurea-350.

MIXING

Both components should be preconditioned to a minimum of 50°F (10°C) 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.

NOTE: The Part B component uses a moisture scavenger in its formulation to pull out any moisture which may have entered during the filling process. When this occurs, the scavenger settles out as a solid in the container. There is no need to try and mix this hard settled material into the liquid. Keep your paddle mixer above the packed-out scavenger and pre-mix as normal. It is still required to pre-mix the material prior to use. Another option would be to transfer the material to a different mixing bucket, then mix as normal.

Pour the Part A and Part B components together in a clean, dry five-gallon container and power mix at 500-700 rpm 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 1:2 by volume, Part A to Part B.

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 $\frac{3}{8}$ inch lint-free roller with a phenolic core.

BRUSH: Use a disposable natural fiber chip brush, 2-4 inch wide for cut in work.



CITADEL® POLYUREA-350

PRODUCT APPLICATION (cont.)

APPLICATION

Apply only when air, material and floor temperatures are between 0-90°F (-18 -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-350. 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, please contact Rust-Oleum Technical Service.

Immediately after mixing, pour the material onto the floor in a long, 8- to 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 80-350 sq. ft./gal. spread rate. Back roll the material smooth using a $\frac{3}{8}$ " lint free roller with a phenolic core to smooth out the finish. If being used as a basecoat for a color aggregate or color flake finish, begin to broadcast the desired amount of aggregate or flake unto the coating as soon as the roller application is completed. Do not do any additional rolling after the broadcasting material.

THINNING: None required. **NOTE:** If necessary, can be thinned up to 20 percent with acetone or methyl ethyl ketone.

CLEAN-UP: Methyl ethyl ketone

PERFORMANCE CHARACTERISTICS

TENSILE STRENGTH

METHOD: ASTM D412
TYPICAL VALUE: 3600

ELONGATION

METHOD: ASTM D412
TYPICAL VALUE: 198

TEAR STRENGTH (PLI)

METHOD: ASTM 2240
TYPICAL VALUE: 350

FLEXIBILITY (1/8" MANDREL)

METHOD: ASTM D1737
RESULT: Pass

IMPACT RESISTANCE

METHOD: ASTM D2794
TYPICAL VALUE: Direct/Reverse, 250/285-inch pounds.

ADHESION

METHOD: ASTM D4541
TYPICAL VALUE: >500 psi

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	RC
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	NR
Methanol	R
Methylene Chloride	C
Mineral Spirits	RC
Motor Oil	R
MTBE	C
Muriatic Acid 10%	R
NaCl/H ₂ O 10%	RC
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	RC
Stearic Acid	R
Sugar/H ₂ O	R
Sulfuric Acid 10%	R
Sulfuric Acid >50%	NR
Toluene	RC
1, 1,1-Trichlorethane	C
Trisodium Phosphate	RC
Vinegar/H ₂ O 5%	R
H ₂ O	R
H ₂ O 14 days at 180°F	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

	TECHNICAL DATA	CDL-11
	CITADEL® POLYUREA-350	

PHYSICAL PROPERTIES

		POLYUREA-350
Resin Type		Polyurea
Weight	Per Gallon	9.9 lbs.
	Per Liter	1.2 kg
Solids by Volume		98%
Volatile Organic Compounds		<50 g/l**
Mixing Ratio		1:2 (Part A to Part B)
Induction Time		None required
Pot Life		20-25 minutes
Recommended Dry Film Thickness (DFT)		5-20 mils
Practical Coverage Rate at Recommended DFT		80-350 sq. ft./gal. Coverage rate can vary depending on the texture and porosity of the concrete
Dry Times @ 70-80°F (21-27°C) and 50% Relative Humidity†	Recoat	2-12 hours*
	Light Traffic	2-4 hours
	Full Traffic	24 hours
Shelf Life		12 months
Safety Information		See SDS

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

† Extreme cold temperatures may slow cure times.

* If 12 hour recoat time has elapsed, the coating must be sanded prior to topcoating.

** Calculated Applied VOC

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Form: ARJ-2096
Rev.: 02XX24

POLYUREA**TECHNICAL DATA****CDL-05****CITADEL® UL 80****DESCRIPTION AND USES**

Citadel® UL 80 is a two component polyaspartic floor coating that provides low odor, excellent UV, chemical, and abrasion resistance plus a 24 hour return to service time. UL 80 is a versatile coating primarily used as top coat over broadcast systems. Smooth or solid color floors may leave an orange peel finish. UL 80 is sold clear, but may be pigmented using Rust-Oleum® Universal Tint Packs.

PRODUCT FEATURES AND BENEFITS

- Fast return to service time, Low Odor and can accept vehicle traffic in 24 hours
- UV Stable, excellent chemical, abrasion, and heat resistance
- Can be applied at temperatures between 30°F to 90°F
- Available in gloss finish

PRODUCT

SKU	DESCRIPTION (Clear)
390092	4 Gallon Kit
390096	10 Gallon Kit

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. Remove surface contamination by cleaning with Krud Kutter® PRO 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.

PRODUCT APPLICATION (cont.)**MIXING**

Both components should be preconditioned to a minimum of 50° F (10°C) 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).

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

ROLLER: Use a high quality $\frac{3}{8}$ 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). Do not apply in direct sunlight or when temperature is rising. Colder environmental conditions can slow the cure of UL 80. 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- to 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.



CITADEL® UL 80

PRODUCT APPLICATION (cont.)

APPLICATION (cont.)

Use a rubber squeegee to spread the material out and achieve the 100-400 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 texture and porosity of the concrete.

THINNING: Not normally required.

CLEAN-UP: 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

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.

CHEMICAL RESISTANCE

CHEMICAL	RESULT
Acetic Acid 100%	C
Acetone	C
Ammonium Hydroxide 50%	RC
Benzene	C
Brine saturated H ₂ O	R
Chlorinated H ₂ O	R
Clorox 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 Hypochlorite 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
H ₂ O	R
H ₂ O 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-05****CITADEL® UL 80****PHYSICAL PROPERTIES**

		UL 80
Resin Type		Polyaspartic Polyurea
Weight	Per Gallon	9.0 lbs.
	Per Liter	1.1 kg/l
Solids by Volume		80%
Volatile Organic Compounds		<250 g/l**
Recommended Dry Film Thickness (DFT) Per Coat		6-12 mils
Recommended Wet Film Thickness (WFT) Per Coat		8-16 mils
Mixing Ratio		1:1 (Part A to Part B)
Induction Time		None required
Pot Life		30-35 minutes
Practical Coverage		100-200 sq.ft./gal. Coverage rate can vary depending on the texture and porosity of the concrete
Dry Times @ 72°F and 50% Relative Humidity†	Tack Free	2-4 hours
	Dry Hard	24 hours for vehicle traffic
	Recoat	2-12 hours*
Shelf Life		2 years
Safety Information		See SDS

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

† 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

The technical data and suggestions for use contained herein are correct to the best of our knowledge, and offered in good faith. The statements of this literature do not constitute a warranty, express, or implied, as to the performance of these products. As conditions and use of our materials are beyond our control, we can guarantee these products only to conform to our standards of quality, and our liability, if any, will be limited to replacement of defective materials. All technical information is subject to change without notice.



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Form: ARJ-1906
Rev.: 011425

POLYUREA**TECHNICAL DATA****CDL-10****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
- 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****SURFACE PREPARATION**

The concrete surface must be free of all dirt, grease, oil, fats, and other contamination. Remove surface contamination by cleaning with Krud Kutter® PRO 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.

PRODUCT APPLICATION (cont.)**SURFACE PREPARATION (cont.)**

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 50°F (10°C) 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).

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 $\frac{3}{8}$ 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 RG80. Variability in these conditions during application may lead to surface defects. For application outside of this temperature range, please contact Rust-Oleum Technical Service.



CITADEL® RG-80X

PRODUCT APPLICATION (cont.)

APPLICATION (cont.)

Immediately after mixing, pour the material onto the floor in a long, 8- to 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 texture and porosity of the concrete.

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

CLEAN-UP: 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

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.

CHEMICAL RESISTANCE

CHEMICAL	RESULT
Acetic Acid 100%	C
Acetone	C
Ammonium Hydroxide 50%	RC
Benzene	C
Brine saturated H ₂ O	R
Chlorinated H ₂ O	R
Clorox 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 Hypochlorite 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
H ₂ O	R
H ₂ O 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 texture and porosity of the concrete
Dry Times @ 72°F 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		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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Form: ARJ-2087
Rev.: 011425



CITADEL® ET-80

DESCRIPTION AND USES

ET-80 is a new and improved version of our popular two-component, 80% solids, VOC Compliant, Aliphatic Polyaspartic. ET-80 has extended pot life, which allows the installer the opportunity to keep more product in the bucket, mix larger quantities of product, and still have the fast cure time characteristics of Polyaspartics.

PRODUCT FEATURES AND BENEFITS

- Displays fast cure times with excellent adhesion characteristics to a variety of substrates/coatings
- Will provide a glossy smooth finish when cured
- Extended open times offer better workability while maintaining a fast cure rate
- 100% Polyurea elastomer displays excellent UV, chemical, and abrasion resistance at a wide range of temperatures
- Can be applied indoors or outdoors with minimal disturbance contributed to high VOC levels that are found in most epoxies and polyurethanes
- Versatile topcoat for use on both horizontal and vertical applications
- Easy to mix 1:1 ratio
- Working time of 30-35 minutes once mixed

PRODUCTS

SKU	DESCRIPTION (Clear)
10433B	A Side 5 Gallon
10434	B Side Slow 5 Gallon
10435A	Slow 4 Gallon Kit

PRODUCT APPLICATION

READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING PROJECT

The concrete surface must be free of all dirt, grease, oil, fats, and other contamination. Remove surface contamination by cleaning with Krud Kutter® PRO 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.

PRODUCT APPLICATION (cont.)

SURFACE PREPARATION (cont.)

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 EQUIPMENT

Low speed drill and spiral mixing wand. Must pre- mix prior to use.

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 (Clear)

Pre-mix Universal Tint Packs prior to adding into floor coatings. 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

APPLICATION EQUIPMENT

24" flat blade squeegee
18"-3/8" lint free roller

APPLICATION

Mix only what you can squeegee and back roll within 30-40 minutes (approximately 1 gallon of mixed material per crew of two applicators wearing spiked shoes). Do not aerate the mix.

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 ET-80. 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, please contact Rust-Oleum Technical Service.

	TECHNICAL DATA	CDL-15
	CITADEL® ET-80	

PRODUCT APPLICATION (cont.)

APPLICATION (cont.)

Wearing spiked shoes, immediately pour mixed ET-80 on the floor in ribbons. Spread using a squeegee and then back roll using a short nap lint-free roller.

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: 7950 psi

TENSILE STRENGTH

METHOD: ASTM D412

RESULT: 4500-5200 psi

BOND STRENGTH TO CONCRETE

METHOD: ASTM D4541

RESULT: Exceeds tensile strength of concrete (concrete fails first)

TABER ABRASION

METHOD: ASTM 4060, CS 17

RESULT: Loss/1000 cycles = 28 mg.

FLAMMABILITY

METHOD: ASTM D635

RESULT: 1.2 cm./min.

COEFFICIENT OF FRICTION

METHOD: ASTM D2047

RESULT: 0.77 unglazed

FILM HARDNESS, SHORE D

METHOD: ASTM D2240

RESULT: 137

ELONGATION

METHOD: ASTM D412

RESULT: 100

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.

CHEMICAL RESISTANCE

CHEMICAL	RESULT (77°F/25°C)
Acetic Acid 100%	C
Acetone	C
Ammonium Hydroxide 50%	RC
Benzene	C
Brine saturated H2O	R
Chlorinated H2O	R
Clorox (10%) H2O	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/H2O 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/H2O	R
Sulfuric Acid 10%	R
Sulfuric Acid >50%	RC
Toluene	R
1, 1,1-Trichlorethane	C
Trisodium Phosphate	R
Vinegar/H2O 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

TECHNICAL DATA**CDL-15****CITADEL® ET-80****PHYSICAL PROPERTIES**

		ET-80
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	80%
	By Volume	80%
Volatile Organic Compounds*		<10 g/l
Recommended Dry Film Thickness (DFT) Per Coat		6-12 mils
Recommended Wet Film Thickness (WFT) Per Coat		8-16 mils
Practical Coverage (assume 15% material loss)		100-200 sq.ft./gal. Coverage rates will vary based on application method.
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/12 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 years
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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