



URETHANE POLYMER CONCRETE RC | FC

Hit Tight Deadlines

KRETUS® URETHANE POLYMER CONCRETE RC | FC is a fast-curing, 100%-solids, 3-component roller-applied system. When working time is limited and/or application temperatures are low, use it to protect areas that are prone to hot and cold industrial power washing, high abrasion, extreme temperatures, and aggressive chemical and thermal attacks. Urethane Polymer Concrete (UPC) outperforms and outlasts epoxy, tile, VCT, concrete, and urethane-sand under extreme industrial conditions.

ADVANTAGES

- Meets USDA, FDA, EPA, and SCAQMD Standards
- Eligible for LEED Points: Made in California from Partially Recycled Materials
- Adhesion to Concrete, Wood, Metal, Non-glazed Tiles
- Antibacterial
- Fast Cure
- High Impact Resistance
- Low Maintenance
- Low Odor
- Self-priming Cementitious Urethane
- Thermal Shock Resistance
- Waterproofing

SUGGESTED USES AND APPLICATION AREAS

- Prime Coat
- Decorative Systems
- Industrial, Healthcare, Commercial, Government, Institutional, and Residential

KRETUS® SYSTEMS

- Color Chip
- Color Quartz
- Color Splash
- ESD (Static Control)
- Industrial Sand
- UPC 1-Coat

For all KRETUS® systems, see kretus.com/systems.

FINISH AND COLOR

- Matte Opaque With or Without Pigment

See kretus.com/color-charts.

PRECAUTIONS AND LIMITATIONS

- **UV Resistance:** Coating will amber over time. If color stability is important, use UV-stable Urethane Polymer Concrete RC UV, Polyurethane, Polyaspartic, or Acrylic Sealer. See kretus.com/products.
- **Prime Coat:** A prime coat may be required when stem walls are highly absorbent, if outgassing is suspected or prevalent, or if concrete is very porous or in poor condition. All concrete repairs must be completed before installing any system.
- Do not let material puddle on floor. This may cause white spots to appear when coating cures.
- Complete samples and onsite mockups to ensure desired results are achieved.

- **Application temperatures:** When temperatures increase, material cures faster. Material cures slower when temperatures decrease.
- Apply material when temperature is decreasing—adhere to the KRETUS® Dew Point Calculation Chart available at kretus.com/project-planning. DO NOT apply under direct sunlight. DO NOT install under inclement weather conditions.
- If application temperatures are outside of those recommended, contact your KRETUS® Technical Representative.
- Application times are based on test results compiled by lab technicians in a controlled setting. All times recorded using 1-quart samples.
- Coverage rates are for estimating purposes only. Factors such as waste, unusual/abnormal substrate conditions, and other unforeseen jobsite conditions may affect actual product yields and are the responsibility of the installer.
- For best results, apply when application temperatures and relative humidity are low.

COMPONENTS

Standard Kit

- **Part A:** Urethane Polymer Concrete RC/TT, 6 lbs.
- **Part B:** Urethane Polymer Concrete RC/TT FC, 6 lbs.
- **Part C:** Urethane Polymer Concrete RC, 6 lbs.

Bulk Kit

- **Part A:** Urethane Polymer Concrete RC/TT, 12 lbs.
- **Part B:** Urethane Polymer Concrete RC/TT FC, 12 lbs.
- **Part C:** Urethane Polymer Concrete RC, 12 lbs.

Larger kits may be available through KRETUS® distributor.

SAFETY, TESTING, AND WARRANTY

- **Safety:** Personal protective equipment and safety conditions must be considered before using any product. Review all relevant and current documentation including Safety Data Sheets (kretus.com/safety-data-sheets).
- **Testing:** Before installation: Test and look for any unknown site conditions and/or defects. To ensure desired results are achieved, the system should be tested in a small area on site before full installation begins.
- **Warranty:** For warranty to be upheld, Pre- and Post-Job Checklists (kretus.com/project-planning) must be completed.

STORAGE AND APPLICATION TEMPERATURES

Ideal Storage Environment	Dry, Out of Direct Sunlight, 60-80°F
Material Temperature During Application	50-70°F and 5°F Above Dew Point
Minimum Substrate Temperature During Application	5°F Above Dew Point
Recommended Application Temperature	40-80°F, <45% RH (Relative Humidity)

Average Application Time

Ambient Temperature	40-80°F, <45% RH	50°F, 50% RH	70°F, 50% RH	100°F, 50% RH
Working Time	10 min	20 min	10 min	5 min
Recoat Window	3 hrs.	8 hrs.	3 hrs.	2 hrs.
Return to Service (Foot Traffic)	2-5 hrs.	10 hrs.	6 hrs.	4 hrs.
Full Cure (Vehicle Traffic)	3 days	3 days	3 days	3 days

SURFACE PREPARATION

Before installing any coating, the substrate must be sound, meaning all necessary repairs have been completed. It must be clean, dry, and free of any contaminants, moisture, materials, or particles that may hinder material's adhesion to the substrate. If applying directly over concrete, the substrate must be mechanically profiled to ICRI CSP 3. Different projects may require a different CSP. Contact your KRETUS® Technical Representative. Adhere to International Concrete Repair Institute current standards.

MIXING AND APPLICATION

Standard Kit Mix Ratio	A:B:C = 6 lbs.:6 lbs.:6 lbs.
Urethane Polymer Concrete Colorant	4 oz per standard kit
Accelerant (at 70°F, decreases working time by 5 min, return to service by 1 hr.)	1-2 oz Poly Accelerant per standard kit
Anti-Slip Bead 50	16 oz. per standard kit
50/50 blend of Anti-Slip Bead 20/Bead 30	16 oz. per standard kit
Anti-slip AO 60 or AO 80	1 lb. per standard kit
Anti-slip 36 or AO 24	Broadcast 1-2 lbs. per 10 SF.
Mixing Drill	High-speed, high-torque drill with Jiffler double-bladed mixer
Mixing Directions	Mix Part A for 15 seconds. Slowly add Part C and continue mixing for 2 minutes or until consistency is uniform. Add Part B and mix for 30 seconds or until color and consistency are uniform.
Mixing Directions With Colorant	Mix Part A and colorant for 15 seconds. Slowly add Part C and continue mixing for 2 minutes or until consistency is uniform. Add Part B and mix for 30 seconds or until color and consistency are uniform.
Mixing Directions With Anti-Slip, Color Quartz, or Sand	Mix Part A and colorant for 15 seconds. Slowly add Part C and continue mixing for 2 minutes or until consistency is uniform. Add Part B and mix for 30 seconds. Add additive and continue to mix for 30 seconds or until color and consistency are uniform.

Coverage Rates per Standard Kit

Prime Coat, 5-7 mils	330-450 SF/kit
Maintenance Coat/Overlay, 25-30 mils	80-90 SF/kit
Base Coat, 8-12 mils	190-280 SF/kit
Base Coat, 15-20 mils	120-150 SF/kit
Base Coat, 25-30 mils	80-90 SF/kit
Cap Coat over Q-6-grade quartz	50 SF/kit
Cap Coat over XF-grade quartz	200-250 SF/kit

Premeasure components to make sure you are using the correct mix ratio. Combine components according to mix instructions. Continue mixing until the coating's consistency is uniform. The coating must remain thoroughly mixed during the application.

Keep a wet edge while applying product. Wear spiked shoes when walking on material. For more applications and coverage rates, see KRETUS® General Overview (kretus.com/product-general-overviews).

PROPERTIES WHEN FULLY CURED

PROPERTIES	TEST METHOD	TYPICAL VALUES
Abrasion Resistance	ASTM D4060	70 mg loss
Abrasion Resistance with Anti-Slip	ASTM D4060	40-60 mg loss
Adhesion Strength	ASTM D4541	>500 psi, concrete failure

Compressive Strength	ASTM C579	7,000 psi
Flame Spread/ Critical Flux	ASTM E648	Class 1
Flame Spread/ Rate of Burning	ASTM D635	Self-extinguishing
Flexural Modulus of Elasticity	ASTM C580	3.5 x 10 ⁶ psi
Flexural Strength	ASTM C580	2,700 psi
Hardness (Shore D)	ASTM D2240	80
Impact Resistance	ASTM D2794	>160 in-lbs.
Indoor Air Quality	CA 01350	Compliant
Linear Shrinkage	ASTM C531	0.20%
Microbial Resistance	ASTM G21	Passes, 0 growth
Moisture Vapor Permeance	ASTM E96	0.15 perms
Tensile Strength	ASTM C307	2,000 psi
Thermal Coefficient of Linear Expansion	ASTM C531	2.0 x 10 ⁻⁵ in/in/°F
Thermal Shock Resistance	ASTM C484	50 cycles, no cracking
Water Absorption	ASTM C413	<0.10%

CHEMICAL AND STAIN RESISTANCE

1 = Best for chemical resistance: Chemical has no adverse effects on fully cured coating; remove within 24 hours.

2 = Low potential for stain: Chemical has no adverse effects on fully cured coating if removed within 24 hours.

3 = High potential for stain or degradation: Chemical must be removed within 24 hours of exposure.

NR = Not recommended

Acetic Acid (Component off Vinegar), 10%	1	Lactic Acid, 30% (Dairy Facility).....	1
Acetic Acid, 30%.....	2	Lime Juice	1
Acetone.....	1	Magnesium Hydroxide.....	1
Ammonia, 30%.....	1	MEK (Methyl Ethyl Ketone)	NR
Ammonium Hydroxide, 30%.....	1	Methanol	NR
Antifreeze (Coolant).....	1	Methylene Chloride	3
Benzene (Component Of Crude Oil)	3	MIBK (Methyl Isobutyl Ketone).....	NR
Benzyl Alcohol	3	Mineral Oil	1
Betadine, 11%	2	Motor Oil, SAE 30	1
Boric Acid, 4%	3	Mineral Spirits.....	NR
Brake Fluid, DOT 3	1	Mustard, Yellow	3
Chromic Acid, 10%.....	1	Nitric Acid, 30%	2
Chromic Acid, 30%.....	1	Oleic Acid	1
Citric Acid, 30%.....	1	Oxalic Acid, 10%.....	1
Ethanol, 95%.....	3	Phosphoric Acid, 20%	1
Ethyl Acetate, 99% (Food/Beverage Facility)	NR	Potassium Hydroxide, 30% (Alkaline Batteries, Soap Manufacturing).....	1
Formaldehyde, 37%	2	Propylene Glycol	1
Premium Gasoline.....	1	Silver Nitrate, 20% (Photo Labs)	3
Hydraulic Fluids (Machinery, Automobile, Aviation)	1	Sodium Chloride, 20%.....	1
Hydrochloric Acid, 10%.....	1	Sodium Hydroxide (Caustic Soda), 50%	1
Hydrochloric Acid, 30%.....	1	Sodium Hypochlorite (Bleach), 10%	2
Hydrofluoric Acid, 10%	1	Sodium Hypochlorite (Bleach), 30%.....	2
Hydrofluoric Acid, 30%	1	Sodium Persulfate (Bleaching and Oxidizing Agent).....	2
Hydrogen Peroxide, 10%	1	Sulfuric Acid, 37% (Battery Acid)	1
Hydrogen Peroxide, 50%	3	Tannic Acid, 20%.....	2
Iodine, 2%.....	3	Tartaric Acid, 10%	1
Isopropyl Alcohol	1	Transmission Fluid	1
Jet Fuel.....	1		

Urine, Dog or Cat	1	Whisky	1
Urea (Nitrogen-Rich Fertilizer).....	1	Wine, Cabernet Sauvignon	1
Vinegar, Distilled	1	Xylene	3
Water (Hard Water from Well)	1		

Pigments or colorants may affect working times, reduce chemical resistance, or increase potential for stain. Coatings tested at ambient temperature over 1-3 days' exposure to chemical. To ensure desired results are achieved, products should be tested on site before installation.

DISCLAIMER: The information contained in this document is intended for use by KRETUS®-qualified and -trained professionals. This is not a legally binding document and does not release the specifier from their responsibility to apply materials correctly under the specific conditions of the construction site and the intended results of the construction process. The most current valid standards for testing and installation, acknowledged rules of technology, as well as KRETUS® technical guidelines must always be adhered to. The steps given in this document and other mentioned documents are critical to the success of your project.