



THOUGHTFULLY DESIGNED CONCRETE COATINGS

URETHANE POLYMER CONCRETE RC / AP

Get Tough Jobs Won

KRETUS® URETHANE POLYMER CONCRETE RC / AP is a low odor, 100% solids, 3-component system designed to withstand hot and cold industrial power washing, high abrasion, extreme temperatures, and aggressive chemical and thermal attacks. This self-priming cementitious urethane outperforms and outlasts epoxy, tile, VCT, concrete, and urethane-sand in extreme industrial environments.

ADVANTAGES

- Meets USDA, FDA, SCAQMD, and VOC Standards
- Eligible for LEED Points: Made in California from Partially Recycled Materials
- Adhesion to Concrete, Wood, Metal, Non-glazed Tiles
- Anti-bacterial
- Extreme Temperature Resistance, -40°F to 266°F (-40°C to 130°C)
- High Traffic and Hot Tire Resistance
- Impact and Scratch Resistance
- Low Maintenance
- Low Odor
- Moisture Vapor Resistance
- Thermal Shock Resistance
- Waterproofing

SUGGESTED USES & APPLICATION AREAS

- Seamless Moisture Mitigation
- Slurry, Mortar, and Decorative Systems
- Industrial, Institutional, Government, Healthcare, Commercial, and Residential

KRETUS® SYSTEMS

- 1-Coat UPC RC (kretus.com/upc-1-coat)
- Color Chip RC (kretus.com/color-chip)
- Color Quartz RC (kretus.com/color-quartz-upc)
- Color Splash RC (kretus.com/color-splash)
- UPC Cove (kretus.com/cove)

FINISH & COLOR

- Matte, Cream
- Colorants: See Urethane Polymer Concrete Color Chart at kretus.com/color-charts.

LIMITATIONS

- Urethane Polymer Concrete will amber over time. If color stability is important, use UV-stable Urethane Polymer Concrete UV, Polyurethane, or Polyaspartic coatings. See kretus.com/products.
- Where outgassing is suspected or prevalent, a Urethane Polymer Concrete RC prime coat may be required.

COMPONENTS

Standard (Single) Kit

- Part A: 6 lbs Urethane Polymer Concrete RC/TT, 1-gallon bucket
- Part B: 6 lbs Urethane Polymer Concrete RC/TT AP, 1-gallon bucket
- Part C: 6 lbs Urethane Polymer Concrete RC, 1-gallon bucket

Bulk (Double) Kit

- Part A: 12 lbs Urethane Polymer Concrete RC/TT, 2-gallon bucket
- Part B: 12 lbs Urethane Polymer Concrete RC/TT AP, 2-gallon bucket
- Part C: 12 lbs Urethane Polymer Concrete RC, 2-gallon bucket

Larger kits available through KRETUS® distributor.

STORAGE & HANDLING

Store materials in a cool, dry place out of direct sunlight. DO NOT mix materials that are warmer than 85°F. Sealed, unopened Parts A and B may be placed in an ice bath to bring the temperature of the material down. DO NOT place any aggregates or additives in ice bath. DO NOT let water into material.

SAFETY

Review current Safety Data Sheet(s) at kretus.com/safety-data-sheets and all relevant documentation before installation. Safety conditions and personal protective equipment must be considered before using any KRETUS® product.

TESTING AND WARRANTY

Before you begin installation, review Pre- and Post-Job Checklists available at kretus.com/project-planning. 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 beginning installation.

SURFACE PREPARATION

Before installing any KRETUS® product, substrate must be clean, profiled, and sound. Refer to Surface Preparation in individual System Installation Guides available at kretus.com/installation-guides.

IDEAL CONDITIONS

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 if rain is forecasted during time allotted for installation.

- higher temperature and/or humidity = reduced working times
- lower temperature and/or humidity = increased working times

MIXING & APPLICATION

Standard Kit Mix Ratio	A:B:C = 6 lbs:6 lbs:6 lbs by weight
with colorant	Add to mix ratio: 4 oz Urethane Polymer Concrete Colorant by volume.
with accelerant.....	Add to mix ratio: 1-2 oz Poly Accelerant by volume. At 70°F: Decreases working time by 5 minutes and return to service by 1 hour.
Mixing Drill	High-RPM, high-torque mixing drill with Jiffler double-bladed mixer.
Mixing Directions	Continue mixing until all parts are combined. Mix Part A for 15 seconds. Slowly add Part C and mix for 2 minutes, or until texture is uniform. Add Part B and mix for 30 seconds.
adding colorant	Continue mixing until all parts are combined. Mix Part A and colorant for 15 seconds. Slowly add Part C and mix for 2 minutes, or until texture is uniform. Add Part B and mix for 30 seconds.
with accelerant, Anti-Slip, quartz, or sand	Continue mixing until all parts are combined. Mix Part A for 15 seconds. Slowly add Part C and mix for 2 minutes, or until texture is uniform. Add Part B and mix for 30 seconds. Add additive and mix for 30 seconds.
Recommended Application Temperature	40-80°F (4-27°C) <70% RH (Relative Humidity)
Working Time Recoat Window	
@ 50°F (10°C), 50% RH	Working Time: 30 min Recoat Window: 12 hrs
@ 70°F (21°C), 50% RH	Working Time: 20 min Recoat Window: 8 hrs
@ 100°F (37°C), 50% RH	Working Time: 10 min Recoat Window: 6 hrs

Return to Service | Full Cure

- @ 50°F (10°C), 50% RH Return to Service: 24 hrs | Full Cure: 5 days
- @ 70°F (21°C), 50% RH Return to Service: 16 hrs | Full Cure: 5 days
- @ 100°F (37°C), 50% RH Return to Service: 10 hrs | Full Cure: 5 days

Standard Kit Coverage Rates*

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

For more applications, see the Urethane Polymer Concrete General Overview at kretus.com/product-general-overviews.

*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.

PROPERTIES OF FULLY CURED COATING

Total Solids	100%
Moisture Vapor Emission Rate, lbs./1,000 sf/24 hrs (ASTM F1869)	<15 lbs.
Relative Humidity (ASTM F2170).....	<99%
Abrasion Resistance, mg loss, CS-17 wheel/1,000g load/1,000 cycles (ASTM D4060).....	40
Adhesion to Concrete, psi (ASTM D4541)	1,000
Compressive Strength, psi (ASTM C109).....	8,000
Compressive Strength, psi (ASTM C579).....	7,250
Coefficient of Linear Thermal Expansion (ASTM D696)	0.000005
Flame Spread/NFPA 101 (ASTM E84)	Class A
Flammability (ASTM D635)	Self-extinguishing
Flexural Modulus of Elasticity, psi (ASTM C580)	300
Flexural Strength, psi (ASTM D790).....	4,400
Heat Resistance Limitation (based on system thickness)	5–158°F (-15–70°C) @1/16-1/8"
.....	-13–176°F (-25–80°C) @3/16"
.....	-40–248°F (-40–120°C) @1/4"
.....	-40–266°F (-40–130°C) @ 1/2"
Impact Resistance (MIL-D-24613)	Pass: No chipping, no cracking
.....	Indentation (24 hrs): 0.0008
Impact Resistance @125 mils (D1709).....	>160 in. lbs
Oil Absorption (MIL-D-3134)	0%
Perm Rating, perms (ASTM E96)	0.1
Shore D Hardness (ASTM D2240).....	85
Tensile Strength, psi (ASTM C307)	1,100
Tensile Strength, psi (ASTM D638).....	750
Thermal Shock or Stability (ASTM C531 Part 4.05)	0.00011
Water Absorption (ASTM D570).....	0%

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

Pigments or colorants may reduce chemical resistance or increase potential for stain. Coatings tested at ambient temperature over 1-3 days’ exposure to chemical. Before completing an installation, products should be tested for chemical resistance on site.

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 be adhered to at all times. The steps given in this document and other mentioned documents are critical to the success of your project.