



TOP SHELF® EPOXY GROUT-RESIN | AP

Get Tough Jobs Won

KRETUS® TOP SHELF® EPOXY GROUT-RESIN | AP is a 2-component, 100% solids resinous system that can be applied in mid- to high-temperature environments. A highly versatile application, this system can be used as a cap/grout coat and a pigmented top coat and has high adhesion to concrete and a 24-hour return-to-service with 7 days to full cure.

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
- Anti-bacterial
- High Traffic and Impact Resistance
- Low Maintenance
- Low Odor
- Waterproofing

SUGGESTED USES AND APPLICATION AREAS

- Crack and Joint Repair
- Cap coat
- Pigmented top coat
- Seamless Moisture Mitigation
- Slurry, Mortar, and Decorative Systems
- Industrial, Healthcare, Commercial, Government, Institutional, and Residential
- ADA Compliant Ramps

KRETUS® SYSTEMS

- Color Chip (base coat)
- Color Quartz
- Industrial Sand

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

FINISH AND COLOR

- Hazy or Opaque when Pigmented: Find Color Charts at 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 if 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.

- Application times are based on test results compiled by lab technicians in a controlled setting. All times recorded using 1-quart samples. All Top Shelf® hardeners were combined with Grout-Resin.
- If application temperatures are outside of those recommended, contact your KRETUS® Technical Representative.
- 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.
- Recommended for Applicators level 3 and up. (See kretus.com/applicator-skill-level.)

COMPONENTS

Single Kit

- **Part A:** Top Shelf® Epoxy Grout-Resin, 2 gal
- **Part B:** Top Shelf® Epoxy AP, 1 gal

Bulk Kit

- Part A: Top Shelf® Epoxy Grout-Resin, 5 gal (x2)
- Part B: Top Shelf® Epoxy AP, 5 gal

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	60-95°, <90% RH

Average Application Time

Ambient Temperature	60-95°, <90% RH	50°F, 50 % RH	70°F, 50 % RH	100°F, 50 % RH
Working Time	25-35 mins	45 min	35 min	25 min
Recoat Window	7.5-36 hrs.	14-36 hrs.	7.5-36 hrs.	6-24 hrs.
Return to Service (Foot Traffic)	24 hrs.	36 hrs.	24 hrs.	24 hrs.
Full Cure (Vehicle Traffic)	7 days	7 days	7 days	7 days

SURFACE PREPARATION

Before installing any coating, the substrate must be sound, meaning all necessary concrete 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 concrete surface profile. Adhere to International Concrete Repair Institute current standards.

MIXING AND APPLICATION

Standard Kit Mix Ratio	A:B = 2 gal: 1 gal
Top Shelf® Epoxy Colorant	16 oz per standard kit

Mixing Drill	low-RPM, low-torque drill with Jiffy double-bladed mixer
Mixing Directions	Mix A until color and consistency are uniform. Add B and continue to mix for 2 min.
Mixing Directions With Viscosity Reducer	Mix A with B for 1 minute. Add additive and continue to mix for 1 minute or until color and consistency is uniform.
Mixing Directions With Colorant	Mix A with colorant until color and consistency is uniform. Add B and continue to mix for 2 min.
Mixing Directions With Aggregate	Mix A alone or with colorant until color and consistency is uniform. Add B and continue to mix for 2 min. Slowly add aggregate and continue to mix for 1 min.

PROPERTIES WHEN FULLY CURED

PROPERTIES	TEST METHOD	TYPICAL VALUES
Abrasion Resistance	ASTM D4060	40 mg loss
Abrasion Resistance with Anti-Slip	ASTM D4060	24-30 mg
Adhesion Strength	ASTM D4541	400 psi, concrete failure
Adhesion Strength	ASTM D4541	400 psi, vinyl failure
Adhesion Strength	ASTM D4541	500 psi, natural quartz failure
Adhesion Strength	ASTM D4541	450 psi, color quartz failure
Compressive Strength	ASTM D695	13,700 psi
Flame Spread/Critical Flux	ASTM E648	Class 1
Flame Spread/Rate of Burning	ASTM D635	Self-extinguishing
Flexural Strength	ASTM D790	9,000 psi
Hardness (Shore D)	ASTM D2240	85
Impact Resistance	ASTM D2794	120 in-lbs
Indoor Air Quality	CA 01350	Compliant
Microbial Resistance	ASTM G21	Passes, 0 growth
Modulus of Elasticity	ASTM D790	5.0 x 10 ⁵ psi
Moisture Vapor Permeance	ASTM E96	0.08 perms
Tensile Elongation at Break	ASTM D638	5%
Tensile Strength	ASTM D638	7,800 psi
Thermal Coefficient of Linear Expansion	ASTM D696	18.0 x 10 ⁻⁶ in/in/°F
Water Absorption	ASTM D570	<0.05%
Moisture Vapor Emission Rate	ASTM F1869	8-10 lbs
Relative Humidity	ASTM F2170	<80%

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 of Vinegar), 10% 1
 Acetic Acid, 30% 2
 Acetone NR
 Ammonia, 30% 1
 Ammonium Hydroxide, 30% 1
 Antifreeze (Coolant) 1

Benzene (Component of Crude Oil) 3
 Benzyl Alcohol 3
 Betadine, 11% NR
 Boric Acid, 4% 1
 Brake Fluid, DOT 3 1
 Chromic Acid, 10% 3

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

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.