



TOP SHELF® EPOXY FLEX RESIN | AP

Tough on Cracks

KRETUS® TOP SHELF® EPOXY FLEX RESIN | AP is a 2-component, 100%-solids resinous system that can be applied in mid- to high-temperature environments. This flexible system is designed to relieve the stress caused by shifting or cracking substrates, keeping your floor protected. Kretus® Top Shelf® Epoxy Flex Resin|AP should be applied over high-movement floors as a resilient cushion against vibration and movement, and as a crack and joint filler.

ADVANTAGES

- Meets USDA, FDA, EPA, and SCAQMD Standards
- Eligible for LEED Points: Made in California from Partially Recycled Materials
- Adhesion to Concrete, Plywood, Metal, Quarry Tiles
- Antibacterial
- High Impact Resistance
- High Traffic and Hot Tire Resistance
- Sound Deadening
- Crack Resistant
- Flexible
- Low Maintenance
- Low Odor
- Scratch Resistance
- Thermal Shock Resistance
- UV Resistance
- Waterproofing

SUGGESTED USES AND APPLICATION AREAS

- Concrete Crack and Joint Filler
- Self-Priming
- High Chemical- and UV-Resistant Top Coat
- Seamless Moisture Mitigation
- Any 3-Dimensional Surface (Vertical/Horizontal)
- Walls and Wall Cove
- Industrial, Healthcare, Commercial, Government, Institutional, and Residential

KRETUS® SYSTEMS

- Color Chip
- Color Quartz
- Color Splash
- ESD (Static Control)
- Industrial Sand
- Top Shelf® Metallic

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

FINISH AND COLOR

- Gloss Clear or Opaque When Pigmented

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.
- 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 A-Resin.
- If application temperatures are outside of those recommended, contact your KRETUS® Technical Representative.
- 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.
- 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.
- Minimum temperature of 60°F is required during curing period.
- Must be applied at uniform thickness for adequate protection

COMPONENTS

Standard Kit

- Part A: Top Shelf® Epoxy Flex Resin, 1 gal
- Part B: Top Shelf® Epoxy AP, 1/2 gal

Bulk Kit

- Part A: Top Shelf® Epoxy Flex Resin, 10 gal
- 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°F, <90% RH (Relative Humidity)

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 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 = 1 gal: 1/2 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 is uniform. Add B and continue to mix for 2 min.
Mixing Directions With Colorant	Mix A with colorant until color and consistency is uniform. Add B and continue to mix for 2 min.

Coverage Rates per Standard Kit

Prime/Base/Top Coat, 15-20 mils	120-160 sf/kit
Base/Top Coat, 25-30 mils	80-100 sf/kit
Base/Top Coat, 50 mils	32-48 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
Adhesion Strength	ASTM D4541	400 psi, concrete failure
Elongation	ASTM D412	150%
Flame Spread/ Critical Flux	ASTM E648	Class 1
Flame Spread/ Rate of Burning	ASTM D635	Self-extinguishing
Hardness (Shore A)	ASTM D2240	90
Indoor Air Quality	CA 01350	Compliant
Microbial Resistance	ASTM G21	Passes, 0 growth
Moisture Vapor Permeance	ASTM E96	0.252 perms
Tear Strength	ASTM D624, DIEA	375 PLI
Tensile Strength	ASTM D412	2,400 psi

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

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.