



THOUGHTFULLY DESIGNED CONCRETE COATINGS

## TOP SHELF® EPOXY T-RESIN | TH

### Low Moisture Readings? Save Money with a Traditional Hardener

Form meets function when beautiful aggregates like pearl, colored marble, or granite, are combined with durable **KRETUS® TOP SHELF® EPOXY T-RESIN | TH**. Even in high-traffic areas, this troweled-down mortar system maintains its polished, jewel-like appearance. This highly versatile 2-component, 100%-solids resinous system can reach full cure in up to 7 days when properly applied over concrete with low MVER (up to 3 lbs.).

#### 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
- High Build, up to 2 inches
- Low Maintenance
- Low Odor
- Waterproofing

#### SUGGESTED USES AND APPLICATION AREAS

- Primer
- Decorative Systems
- Industrial, Healthcare, Commercial, Government, Institutional, and Residential

#### FINISH AND COLOR

- Gloss Clear or Opaque when Pigmented: Find Color Charts at [kretus.com/color-charts](http://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](http://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 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](http://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](http://kretus.com/applicator-skill-level).)

## COMPONENTS

### Standard Kit

- **Part A:** Top Shelf® Epoxy T-Resin, 5 gal
- **Part B:** Top Shelf® Epoxy TH, 1 gal
- **Part C:** Kretus® approved aggregate, 180 lbs.

Larger kits may be available through KRETUS® distributor.

### Bulk Kit

- **Part A:** Top Shelf® Epoxy T-Resin, 25 gal
- **Part B:** Top Shelf® Epoxy TH, 5 gal
- **Part C:** Kretus® approved aggregate, 900 lbs.

## 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](http://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](http://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	60-80°F, <90% RH

## Average Application Time

Ambient Temperature	60-80°F, <90% RH	50°F, 50 % RH	70°F, 50 % RH	100°F, 50 % RH
Working Time	20-25 mins	20-25 min	25 min	20 min
Recoat Window	8-24 hrs.	16-36 hrs.	8-24 hrs.	6-24 hrs.
Return to Service (Foot Traffic)	24 hrs.	36 hrs.	24 hrs.	24 hrs.
Full Cure (Vehicle Traffic Ready)	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:C = 5 gal:1 gal:180 lbs.
Top Shelf® Epoxy Colorant	16 to 32 oz per standard kit
Mixing Drill	Variable speed with Jiffy double-bladed mixer
Mixing Directions	Combine Part A with Colorant until color is consistent throughout. Add Part B and mix for 2 min. Slowly add aggregate and continue to mix until consistency is uniform.
Base Coat, 40 mils	240 sf per standard 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](http://kretus.com/product-general-overviews)).

**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 <sup>5</sup> 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 <sup>-6</sup> in/in/°F
Water Absorption	ASTM D570	<0.05%
Moisture Vapor Emission Rate	ASTM F1869	<3 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	Ethanol, 95%.....	NR
Acetic Acid, 30%.....	2	Ethyl Acetate, 99% (Food/Beverage Facility) .....	NR
Acetone.....	NR	Formaldehyde, 37% .....	3
Ammonia, 30%.....	1	Premium Gasoline.....	1
Ammonium Hydroxide, 30%.....	1	Hydraulic Fluids	
Antifreeze (Coolant).....	1	(Machinery, Automobile, Aviation) .....	2
Benzene (Component of Crude Oil).....	3	Hydrochloric Acid, 10%.....	3
Benzyl Alcohol .....	3	Hydrochloric Acid, 30%.....	3
Betadine, 11% .....	NR	Hydrofluoric Acid, 10% .....	1
Boric Acid, 4% .....	1	Hydrofluoric Acid, 30% .....	3
Brake Fluid, DOT 3 .....	1	Hydrogen Peroxide, 10% .....	NR
Chromic Acid, 10%.....	3	Hydrogen Peroxide, 50% .....	NR
Chromic Acid, 30%.....	3	Iodine, 2% .....	3
Citric Acid, 30% .....	1	Isopropyl Alcohol .....	3

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