



## POLYURETHANE HS | FC

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### Hit Tight Deadlines

**POLYURETHANE HS | FC** is a 2-component system with a fast-cure (FC) hardener for quick return-to-service. Perfect for high-traffic areas like forklift loading zones, drive aprons, and commercial walkways, this UV-resistant coating is designed for high-build applications (up to 20 mils) and can be used as a prime, body, and top coat.

#### ADVANTAGES

- Meets USDA, FDA, EPA, and SCAQMD Standards
- Adhesion to Concrete, Wood, Metal, Non-glazed Tiles
- Antibacterial
- Can Be Applied at or Below 40°F
- Fast Cure
- Eligible for LEED Points: Made in California from Partially Recycled Materials
- High Impact Resistance
- High Traffic and Hot Tire Resistance
- Low Maintenance
- Low Odor
- Scratch Resistance
- UV Resistance
- Waterproofing

#### SUGGESTED USES AND APPLICATION AREAS

- Prime, Base, and Top Coats
- Vertical Surfaces
- Industrial, Healthcare, Commercial, Government, Institutional, and Residential

#### KRETUS® SYSTEMS

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

For all KRETUS® systems, see [kretus.com/systems](https://kretus.com/systems).

#### FINISH AND COLOR

- High Shine/Gloss, Clear
- Opaque when Pigmented (see Color Charts at [kretus.com/color-charts](https://kretus.com/color-charts))

#### PRECAUTIONS AND LIMITATIONS

- **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 apply single coat greater than 20 mils thick (80 square feet per gallon).
- 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:** Material cures faster as temperature and humidity increase. Material cures slower as they decrease.
- Application times are based on test results compiled by lab technicians in a controlled setting. All times recorded using 1-quart samples.
- 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.
- For best results, apply when application temperatures and relative humidity are low.
- Recommended for Applicators level 3 and up. (See [kretus.com/applicator-skill-level](http://kretus.com/applicator-skill-level).)

## COMPONENTS

### Standard Kit

- Part A: Polyurethane HS FC, 1 gallon
- Part B: Polyurethane HS, 1/2 gallon

### Double Kit

- Part A: Polyurethane HS FC, 2 gallons
- Part B: Polyurethane HS, 1 gallon

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](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	40-80°F, <40% RH (Relative Humidity)

## Average Application Time

Ambient Temperature	40-80°F, <40% RH	50°F, 30% RH	50°F, 75% RH	70°F, 50% RH	90°F, 20% RH	90°F, 80% RH
Working Time	15-20 min	15-20 min	10-15 min	15-20 min	20 min	NR
Recoat Window	2-4 hrs.	2-12 hrs.	2-12 hrs.	2-12 hrs.	2-12 hrs.	NR
Return to Service (Foot Traffic)	12 hrs.	24 hrs.	24 hrs.	12 hrs.	12 hrs.	NR
Full Cure (Vehicle Traffic)	7 days	5 days	7 days	5 days	5 days	NR

\*NR=Not Recommended

## 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 = 1 gal:1/2 gal
Poly Colorant	16 oz per standard kit
Viscosity Reducer	1-2 qts per standard kit
Fumed Silica	1 qt 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 Colorant	Mix A with colorant until color and consistency are uniform. Add B and continue to mix for 2 min.
Mixing Directions With Viscosity Reducer	Mix A with colorant until color and consistency are uniform. Add B and continue to mix for 2 min.
Mixing Directions With Anti-Slip or Fumed Silica	Mix A alone or with or without colorant until color and consistency is uniform. Add additive and continue to mix for 1 min. Add B and continue to mix for 1 min.

## Coverage Rates

Application	Coverage Rate
Prime Coat	300 SF/gal
Base Coat, 8-12 mils	100-150 SF/gal
Metallic Base Coat, 15-20 mils	80-105 SF/gal
Broadcast System Cap Coat Over 1/4" Color Chip	125-200 SF/gal
Broadcast System Cap Coat Over F-Grade, 40-S, or 30-Mesh Quartz or Sand	90-100 SF/gal
Vertical Coat, 12 mils	400 SF/gal

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	15 mg loss
Adhesion Strength	ASTM D4541	400 psi, 100% Concrete failure
Coefficient of Friction - Dry	ASTM D2047	0.7
Coefficient of Friction - Wet	ASTM D2047	0.6
Flame Spread/ Critical Flux	ASTM E648	Class 1
Flame Spread/ Rate of Burning	ASTM D635	Self-extinguishing
Flexibility/ Mandrel Bend	ASTM D522	Passes 1/8-in.

Gloss, 60°	ASTM D523	90
Hardness (König Hardness)	ASTM D4366	150
Impact Resistance	ASTM D2794	120 in-lbs
Indoor Air Quality	CA 01350	Compliant
Microbial Resistance	ASTM G21	Passes, 0 growth
Tensile Elongation at Break	ASTM D2370	5%
Tensile Strength	ASTM D2370	6,000 psi
UV Resistance	ASTM D4587	High (Level 3)
Water Absorption	ASTM D570	<0.05
Yellowing Resistance	ASTM G154	< 3.0 ΔE, gray (color tested for visible changes)

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