



POLYURETHANE CONCRETE TROWEL SYSTEM

GENERAL PRODUCT DESCRIPTION

PetraCrete U HF is a hybrid, three component polyurethane concrete floor system. Its unique formulation makes it ideal for many harsh environmental conditions. It is especially suited to handle high temperature sanitary wash down and steam where thermal cycling is present. In addition, PetraCrete U HF has excellent chemical resistance. It is generally applied between 1/4" and 3/8" (6 - 9 mm). PetraCrete U HF is USDA accepted for use in federally inspected food facilities. Advantages:

- Resistant to thermal shock
- -50 to 250 degrees F temperature range
- Ideal for CIP (Cleaning-In-Place) applications
- Handles severe impact conditions
- Anti-slip surface
- Seamless flooring system
- Essentially odorless
- Withstands heavy forklift traffic
- Chemical resistant
- Abrasion resistant

INDUSTRIAL APPLICATIONS

- Beverage Plants
- Dairies
- Food Processing
- Freezers and Cold Storage
- Meat Packing and Poultry
- Fryer Lines
- Chemical and Secondary Containment
- Commercial Kitchens
- Bakeries
- Pharmaceutical

PRODUCT DATA

Coverage per 1-gal kit: 17-20 Square feet @ 1/4"
 Volumetric Ratio: 1 to 1
 Solids: N/A
 V.O.C. 0
 Application Temperature: 65-90°F and 5° above the dew point
 Thinning: Not required
 Pot Life: 15 minutes
 Time to join one batch to next batch: 10 minutes
 Cure Time: 4-6 hours (walking)
 12-16 hours (traffic)
 Shelf life: 6 months
 USDA Food and Beverage: Meets requirements

PHYSICAL PROPERTIES

PROPERTY	VALUE	REFERENCE
Compressive Strength	8,200 psi	ASTM C 579
Flexural Strength	2,375 psi	ASTM C 580
Tensile Strength	920 psi	ASTM D 307
Bond to Concrete	350 psi concrete fails at this point	ASTM D 4541
Coefficient of Thermal Expansion	<- 12.6 X 10	ASTM C 531
Water Absorption	.10% maximum	ASTM D 413
Linear Shrinkage	.20% maximum	ASTM C 531
Impact Resistance	16 ft. lb. - no failure	Mil-D-3134H
Anti-Microbial	Passes	G-21
Coefficient of Friction	Passes	ASTM D 2047
Modulus of Elasticity	1.8 X 10	ASTM C 580
Temperature Rating	230°F	

CHEMICAL RESISTANCE

Acetic Acid 30%	R	Hydrochloric Acid 37%	R
Ethanol	R	Nitric Acid 30%	SS
Alcohol, Isopropyl	SS	Phosphoric Acid	SS
Aluminum Hydroxide	R	Skydrol R	R
Citric Acid	R	Sodium Bisulfate	R
Copper Chloride	R	Sodium Chloride	R
Diesel	R	Sodium Hydroxide 50%	R
Ferric Acid	R	Sulfuric Acid 50%	R

Note: The above guide is based on seven days exposure of the listed chemical at 72 degrees F (22 degrees C)
 Key: R = Recommended, SS = Splash and Spill, NR = Not Recommended.
 Above chart serves as a guideline only. Samples will be furnished upon request for testing.

PETRACRETE U HF

CONCRETE PREPARATION

Before the coating is applied, the concrete must be:

- Clean – Contaminants removed
- Profiled – Surface etched
- Sound – Cracks repaired

Mechanical methods are preferred for preparing concrete prior to coating application. Shot-blasting, diamond grinding, scarifying, and scabbling are all acceptable methods. The concrete profile should approximate 60-80 grit sandpaper after preparation.

VERTICAL MIX

PetraCrete U HF can be made into a vertical mix by doing the following: Mix together half a gallon of base coat (see above) A and half a gallon of base coat B. Slowly add 1 to 3 quarts of Aerosil 200 (or, Cabosil M5) into mix. Next, add in 1/2 gallon of 30-40 mesh silica. Adjust per temperature conditions.

MIXING

The ratio of PetraCrete U HF is, one-half gallon of A to one-half gallon of B to one bag (48#) of part C. Mix the following with a drill and jiffler mixer.

1. In an empty five gallon bucket, pour 1/2 gallon of Part A and 1/2 gallon of Part B. If pigment is on the side, add 4 oz. of pigment. Mix with jiffler mixer for 30-45 seconds.
2. Add one bag of part C (48 pounds) and mix with jiffler for 30-45 seconds.

APPLICATION PROCESS

PetraCrete U HF is best applied with a trowel. After mixing, immediately dump all of the material out of the bucket and onto the properly prepared concrete.

1. Trowel out to the desired thickness (usually 3/16" to 1/4") and finish.
2. For a smoother and more even finish use a 3/8" nap non shedding roller and roll over the freshly troweled surface.
3. Optional broadcast. For added texture you may broadcast selected aggregate into the wet newly finished surface. For a low texture use finer grades of aggregate and with a light broadcast, you may even back-roll the aggregate into the surface for a more sealed look. Note: the working time is short so you must move quickly

Notes: The amount of anti-slip surface can be varied by using larger or smaller aggregate in the final broadcast coat. Other Petra TC systems may be used as the final top coat. Optional Finish Coat. An optional coat of PetraThane CRU is recommended for gloss and stain resistance after PetraCrete U HF is thoroughly dry.

COLOR SELECTION

PetraCrete U HF is available in the following colors: Gray, Tile Red, Green, and Tan. Other colors are available at an additional charge.

PACKAGING

PetraCrete U HF is available in the following kit sizes:

	<u>Part A</u>	<u>Part B</u>	<u>Part C</u>
1 Gallon Kit	0.5 gal.	0.5 gal.	One Bag
2 Gallon Kit	1 gal.	1 gal.	Two Bags
10 Gallon Kit	5 gal.	5 gal.	Ten Bags

CLEANUP

PetraCrete U HF while in a liquid state may be cleaned up with water and degreaser. Otherwise a strong solvent may be required while PetraCrete U HF is setting up.

WARRANTY

Petra Industrial Polymers products are warranted for one year after date of application. Please refer to the Petra Industrial Polymer's Limited Material Warranty for additional clarification.

SAFETY

Consult PetraCrete U HF material safety data sheet. Avoid PetraCrete U HF contact with skin. Some individuals may be allergic to epoxy.



Information expressed in this data sheet is correct to the best of our knowledge. The technical data sheet does not constitute a warranty, expressed or implied as to the performance of this product. The use and application of this product is beyond our control. Warranty and liability therefore is limited to the replacement only for defective materials. Technical information is subjected to change without cause.