

**TD.702 – TECHNICAL DATA: HERMETIC™ 4.8S Urethane Cement Slurry**

Revised: 7.25.17

**Product Description:**

*Elite Crete Hermetic 4.8S Urethane slurry* is a three component Urethane slurry that is applied by screed rake to concrete floors and broadcast to excess with 50 mesh dry silica sand, color quartz sand or aluminum oxide to create a non-slip floor for wet areas. Unaffected by forced hot steam up to 230° F and will cure in cold damp conditions. Fast setting and resistant to a variety of chemicals (*see chemical resistance chart on this data sheet*). *Elite Crete 3/16" Urethane slurry* is Seamless, replacing the need for costly tiles with failed joints where bacteria can grow. Bonds to slightly damp concrete. Slurry broadcast coat and one top coat will yield a 1/4"-5/16 "thickness. For heavy thermal shock attack areas a 5/16" thickness is recommended as a minimum. For Freezer flooring applications an accelerator is available to assist in curing speed at 0°F temperatures.

**USES:**

- All food manufacturing & processing facilities
- Dairies, Breweries, Wineries, Meat and Poultry plants
- Commercial kitchens
- Bottling sanitizing & wash areas
- Meets USDA, FDA, and CFIA standards
- Loading docks,
- Chemical processing plants
- Beverage plants
- Warehouse and storage facilities
- Cold rooms, freezers

**FEATURES:**

- Excellent chemical resistance
- Water based, VOC compliant
- Passes ADA recommendations
- Fast curing, one step installation
- Pharmaceutical plants
- Will not support bacterial growth
- Resistant to forced hot steam over 230 F
- Can be applied down to -0 F (no moisture/ice in or on substrate)
- Zero VOC
- Osmotic pressure resistant up to 20 lbs. (Test for suitability)
- No odor
- Easy Clean up with Elite Crete EXIT
- CA 01350 indoor air quality compliant
- Does not contain phthalates

**Physical Properties**

Property	Test Standard	Result
Mix Ratio:		pre-engineered 3 component unit
Application Temperatures:		0°F to maximum of 85°F
Gel Time: 1 GALLON @ 70 F		14 minutes
Colors:		5 colors available
Water Absorption	ASTM D 570	0,03%
Compressive Strength	ASTM C-579	12,800 psi
Shore D hardness	ASTM D-2240	80-85
Adhesion	ASTM D-4541	>400 (100% concrete failure)
Tensile strength	ASTM D-638	4,400 psi
Flexural Strength	ASTM D-790	6,300 psi
Impact resistance	ASTM D-2794	PASS
Abrasion Resistance	ASTM D-4060	2 mg lost
Thermal Shock Resistance	MIL F-52505	no cracking or loss of adhesion
Service temperature		-100 – 230F ( <u>forced</u> hot steam)
VOC Content		0 g/l
Coefficient of friction		0.9 (passes ADA recommendations)
Standard slip-resistant	ASTM D-2047	Compliant
Indoor Air Quality	CA 01350	Class 1
Flammability	ASTM E-648	

**Chemical Resistance**

1 = no effect with clean up and wash down within 48 hours,  
 2 = clean up and wash down within 24 hours,  
 3 = clean up and wash down within 1 hour  
 4 = Not recommended

Acetone	3
Acetic Acid 1-10%	2
Acetic Acid 11-25%	3
Alcohol: (beer, wine, whisky, white spirits)	2
Ammonium Chloride 1-40%	2
Ammonium Hydroxide 1-10%	1
Ammonium Hydroxide 11-50%	2
Ammonium Sulphate 1-10%	1
Ammonium Hydroxide 11-50%	2



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Brine (saturated)	1
Citric Acid 35%	1
Citric Acid 50%	2
Diesel Fuel	1
Diesel Oil	1
Ethylene Glycol	1
Fats, Oils Sugars	1
Formic Acid 1-20%	1
Formic Acid 21-50%	2
Gasoline, Jet Fuels (JP-4, 6), kerosene	1
Grape Juice	1
Hydraulic Oils	1
Hydrochloric Acid 1-10%	1
Hydrochloric Acid 11-20%	2
Hydrochloric Acid 21-37%	3
Hydrogen Peroxide 1-20%	1
Isopropyl Alcohol	1
Lactic Acid 1-10% (milk)	1
Lactic Acid 11-20%	2
Methyl ethyl ketone	3
Mineral Oil	1
Motor Oil	1
Nitric Acid 1-5%	3
Nitric Acid 6% -70%	4
Potassium Hydroxide 50%	1
Sulfuric Acid 1-5%	2
Turpentine	1
Toluene	3
Xylene	3

**Some chemicals may cause discoloration in the flooring without affecting the performance or physical properties of the system. Test for suitability before use.**

**Packaging and Storage:**

Elite Crete 3/16" urethane slurry is supplied in pre-measured units:

- Part A 1.10 gallon (4.21 Ltr.) in 1 gallon pail
- Part B 0.692 gallon(2.63 Ltr.) in an 1 gallon pail
- Part C 40 lb. plastic lined bag of cement slurry aggregate

- This product has been engineered to meet demanding standards,
- Only mix whole complete units to assure the performance criteria in this data sheet.
- Do not use partial units or try to break down the unit as the performance will be compromised.
- Do not allow this product to freeze.
- Store in a dry environment between 50-85 F.
- All Elite Crete Products are shipped with a lot number on the label. The first two digits indicate the year, the second two digits indicate the day, and the last two digits indicate the month. Shelf Life is 6 months from the date on the label in the original unopened containers.

**Coverages: 1 Unit coverage**

22 square feet at 1/4" thickness  
 12.5 square feet at 3/8" thickness

**Cure Schedule: (70 F)**

Working Time: 14 minutes @70F (less at higher temperatures)  
 Recoat, Foot Traffic: 4-12 hours (depending upon substrate temperature)  
 Wheeled Traffic: 24 hours  
 Thermal shock resistance 48 hours  
 Full Cure: 72 hours  
 Working time at (0°F) with accelerator added to the mix



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Working time: 11 minutes (In 0°F ambient temperature)

Top coat: 24 hours

Full traffic 48 hours

#### Colors:

Stocked colors:

- light gray
- medium gray
- dark gray
- tan
- red

Other colors available on request with two week lead time

#### Preparation:

Remove all contaminants and weak laitance in the concrete with appropriate degreasers and shot blasting for the final profile or use other mechanical means, washing the surface or sanding is not acceptable. Key all termination points and around all drains. Honor all joints in the concrete slab. Concrete must be at least 14 days old. A working vapor barrier on all on grade substrates is recommended before application of Elite Crete 3/16" Urethane Slurry

#### Mixing & Application:

**APPLICATION TEMPERATURES 0°F TO MAXIMUM OF 85°F IN TEMPERATURES LOWER OR HIGHER THAN RECOMMENDED, CURE SPEED AND BLISTERING MAY OCCUR IN THE COATING.**

Condition parts A, B C to room Temperature between 60°F - 75°F. ( Using a mud Paddle and VARIABLE SPEED ½ HP electric drill in a suitable size container pour in part A and 1 Pint of Water Borne Pigment dispersion and mix for 1 minute, Immediately add part B and begin to mix while adding part C aggregate. **Mix a minimum of two minutes**, or until completely blended. **Failure to mix for the full two minutes may cause blisters in the slurry mix if the cement and lime are not completely disbursed in the liquid.** THROUGH MIXING IS MANDATORY TO ENSURE THE PRODUCT FLOWS AND LEVELS EASILY, IF THERE IS LUMPS IN THE SLURRY THE PRODUCT WILL NOT SQUEEGEE OUT UNIFORMELY.

**IMMEDIATELY** pour the mixed slurry onto the prepared substrate and spread with a gage rake or drop box to desired thickness (3/16") is the minimum thickness the slurry can be applied. After spreading fill in any low spots or holidays, and back roll with a porcupine roller in two different directions. As soon as the slurry is back rolled, broadcast the desired aggregate to excess and allow to cure, **@70F the open time to broadcast the aggregate is 12-14 minutes. Do not delay, as soon as the part B is added to the mixing pail the working time begins.**

Depending upon the ambient and substrate temperature in 8-12 hours check to see if the slurry has set up enough to sweep up excess silica sand and vacuum loose sand.

#### Top Coat

Apply PT-4 fast set top coat in the same color as the slurry base color.

If this product is exposed to direct sunlight Apply AUS-V top coat in the same color as the base slurry color.

#### Clean up:

Clean tools with Elite Crete Exit which is nonhazardous. Xylene may also be used on tools to clean them however which ever cleaner is selected, clean the tools before the mortar has hardened. Elite Crete Exit may be used to clean the mortar mixer as well by pouring in Exit and running the mixer for 1 minute, then stop the mixer and wipe with a clean rag. After cleaning, drain the cleaner fluid and wipe the mixer down so not residue is present in the mixer. Clean the mixing blades often during the project.

#### Limitations:

Exposure to ultraviolet light will change the color of Elite Crete Urethane mortar. Sunlight and Metal Halide lighting will cause yellowing without affecting the performance. As an option a coat of AUS-V top coat can be applied to prevent ambering. Contact your local Elite Crete manager for Consultation.



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## MIXING AND APPLICATION IN 0°F TEMPERATURE APPLICATIONS

**NOTE: do not apply this product in the presence of frozen water in the substrate**

### Mixing & Application:

#### Condition Part A and Part B to (70-73°F) condition part C to (0°F)

After part A, part B are properly conditioned between 60°F-75°F Condition part C in the freezer for at least 2 hours or longer., bring in part A and Part B to the freezer and begin mixing sequence as follows: Using a mud Paddle and VARIABLE SPEED ½ HP electric drill in a suitable size container pour in part A and accelerator and mix for 1 minute. Add part B (working time begins) and mix for 15 seconds and begin to immediately add the conditioned part C mortar mix. **Mix a minimum of two minutes**, or until completely blended. **Failure to mix for the full two minutes may cause blisters in the slurry mix if the cement and lime are not completely disbursed in the liquid.** THROUGH MIXING IS MANDATORY TO ENSURE THE PRODUCT FLOWS AND LEVELS EASILY, IF THERE IS LUMPS IN THE SLURRY THE PRODUCT WILL NOT SQUEEGEE OUT UNIFORMELY.

**IMMEDIATELY** pour the mixed slurry onto the prepared substrate and spread with a gage rake or drop box to desired thickness (3/16") is the minimum thickness the slurry can be applied. After spreading fill in any low spots or holidays, and back roll with a porcupine roller in two different directions. If the freezer will be dry, no broadcast will be necessary.

**Do not delay, as soon as the part B is added to the mixing pail the working time begins.**

If this product is exposed to direct sunlight discoloration could occur but will not affect performance

## LIMITED WARRANTY

Neither seller nor manufacturer has any knowledge or control concerning the purchaser's use of this system/product. The seller or manufacturer with respect to the results of any use of the product makes no express warranty. NO IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO AN IMPLIED WARRANTY OF MERCHANTABILITY, OR AN IMPLIED WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE ARE MADE WITH RESPECT TO THIS SYSTEM/PRODUCT. Neither seller nor manufacturer nor representative of such system/ product assumes any liability for personal injury or loss from the use of this product. In the event such product is defective, the buyer's exclusive and only remedy shall be as follows: Seller or manufacturer shall, upon written request of the buyer, replace any quantity of the system/product which is proven to be defective or shall at its option refund the purchase price for the system/product upon the return of proven defective system/ product.