# **5-7000** Underlayment<sup>™</sup>

#### TECHNICAL DATA SHEET

### **DESCRIPTION**

S-7000 Underlayment™ is a dry, pre-blended, ready-mixed cementitious product which is mixed with water only and is used as a leveling, re-grading and sub-floor material over concrete and wood substrates. S-7000 Underlayment provides a co-adhesive bond with the substrate and is fire and water resistant. S-7000 Underlayment can be installed in any thickness ranging from 0"-6". It can achieve strengths of 8,500 psi, yet remain flexible and resilient. S-7000 Underlayment is typically used for underlayment over existing concrete surfaces and above-grade wood decks. It is also used for structural repairs of bridges, parking structures and many other cementitious substrates.

### **USES**

Interior / Exterior Applications Anti-skid Textures
Bridges Filling Spalls & Low Spots
Highways Re-grading / Re-sloping

Parking Structures On-grade / Vertical / Overhead Repairs

Sidewalks Balconies

Concrete / Wood Deck Underlayment Structural Concrete Repairs



### **ADVANTAGES**

Flexible and versatile
Eliminates the need for concrete removal
Ready-mixed formula - Just add water
Superior bonding capabilities
Requires no bonding agents or primers
Weather resistant

Can be applied from 1/8" to 6" thickness

Water resistant/non-reemulsifiable Resists freeze/thaw conditions Environmentally friendly OSHA compliant Non-skid capabilities Waterproofs and seals

# **CSI RELATED SECTIONS**

07 16 13 - Polymer Modified Cement Waterproofing 09 61 13 - Slip Resistant Flooring 03 53 00 - Concrete Topping 09 97 26 - Cementitious Coatings

03 53 00 - Concrete Topping 09 97 26 - Cementifious Coatings 32 01 19.62 - Patching of Rigid Paving 06 16 26 - Underlayment 32 01 26.74 - Concrete Overlay

07 11 16 - Cementitious Dampproofing

# **SURFACE PREPARATION**

Surfaces that are to be repaired or coated must be structurally sound. Surface damage such as surface deterioration, cracks and spalls can typically be repaired. However, structural integrity is critical to the overall success of any coating or overlay. Remove any loose, soft or contaminated materials from the area that is to be repaired or resurfaced. Any existing coatings, sealers, curing agents, bond-breakers, etc. must be removed from the surface providing direct contact with the original substrate to assure adhesion. Typical preparation methods may include scraping, water blasting, sand blasting, shot blasting, cleaning and degreasing. **Note: All expansion joints must be honored.** Clean, repair and honor all control and expansion joints during entire application process, or mark them for reestablishing them after application. Clean and treat all cracks and spalls in accordance with manufacturer's specifications.

Arizona Polymer Flooring recommends that all Super-Krete cementitious overlay product applications, over concrete, first be treated with S-3000 Pene-Krete<sup>®</sup>. Always refer to the Super-Krete Products Surface Preparation Guide for surface testing, cleaning, preparation and porosity requirements prior to applying S-7000 Underlayment to any concrete surface.





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### **MIXING**

The amount of water required will depend upon the desired consistency and the repair or re-surface requirements. Determine in advance whether the required mix will be for thin-set repairs, dry packing or for deep fills.

<u>Manual - For Mixing Small Quantities:</u> Add 4 quarts of clean water to a container such as a 5 gallon pail and add 1 (50 lb.) bag of S-7000 Underlayment to the water while agitating with a hand drill and paddle mixer attachment. Add additional water while mixing if needed, until the desired consistency is achieved. Allow material to sit for approximately 5 minutes to allow water to saturate the fine aggregate. Add water as needed or when a flowable consistency is desired. For vertical or overhead repairs, a dry slump consistency is recommended (add less water).

**Mechanical - For Mixing Large Quantities:** Add desired amount of S-7000 Underlayment units to the plaster mixer and add clean water until the desired consistency is achieved. Allow material to sit for approximately 5 minutes to allow water to saturate the fine aggregate. Add additional water as needed.

Note: For a dryer mix, add less water or more S-7000 Underlayment. For a wetter mix, add more water or less S-7000 Underlayment. The proper consistency is based upon the applicator's choice of application. For hand trowel applications or for applying to vertical and overhead surfaces, the applicator may choose to have a dryer or less fluid mix. For screeding, a more fluid mix is recommended. The appropriate amount of water is necessary for S-7000 Underlayment to maintain the desired thickness. Do not over-dilute S-7000 Underlayment with water. Over-dilution is visible when sand fines begin to separate from the mix, causing them to settle at the bottom. 3/8" or larger gravel can be used as an extending material and to increase the strength of the mix.

## **APPLICATION**

S-7000 Underlament can be applied by squeegee, trowel, gauge rake or as a self-leveling product. In every application, a light spray of water is recommended to be applied over all concrete substrates prior to application of S-7000 Underlayment. The spraying of water opens the pores of the concrete and allows the underlayment to create a co-adhesive bond. Should S-7000 Underlayment become unworkable, simply spray a mist of water over the area and it will become workable.

**Repairs / Patching:** Any structural repairs, crack treatments, patches and deep fills should be completed prior to resurfacing or squeegee applications.

<u>Build-Up Areas / Deep Fill Repairs</u>: S-7000 Underlayment can be extended using up to 25 lbs. of 3/8" pea gravel rock per 50 lb. bag. Apply the mixture to low area and trowel, squeegee or screed mixture with a straight edge tool for desired surface finish.

Squeegee Coats: A squeegee mix should be used when resurfacing in thin layers. A squeegee coat can be applied as thin as 1/32" using a Super-Krete Squeegee<sup>TM</sup>. Mix Underlayment thoroughly to desired consistency. Dampen surface to be coated with clean water. Evenly distribute material by pouring it onto the surface, spreading the material from one side of working area across to the other in a 6"-8" wide pour. Spread immediately using a squeegee to spread the material from side to side while working towards the nearest joint or end of work area. For even application, ensure the squeegee is held at 45° to the direction of travel. If Underlayment begins to dry, leave a residue or curdle on surface, spray the area with a light mist of water and squeegee the material until surface is uniform. Two or more applications are typically required to achieve an anti-skid finish.

Broom Finishing: To achieve a broom finish, apply the first coat with squeegee and broom finish the last application by pulling a stiff-bristled broom that is turned upside-down so that bristles face away from direction of travel and pull the material in the direction of desired finish. Dragging the broom in an upside-down position allows broom to drag across the surface evenly without pulling the material and clumping.

<u>Trowel Finish</u>: After 1st coat, following directions above, material may be trowelled to desired finish or texture. A trowel finish can be achieved by using a trowel instead of a broom to finish the second coat.

Structural repairs: Structural repairs can be made by pouring a flowable mixture into forms or by hand-trowelling a dry slump mix. Leveling: When Underlayment is used as a self leveling surface the mixed material is poured onto the surface in a flowable consistency, gauge raked and floated for smoothness. For re-grading a surface, mix Underlayment with water to a semi-dry slump, and screed the material over the surface using a straight edge and finish with a trowel. Super-Krete always recommends a light spray of water be applied to all concrete substrates prior to application of Underlayment. The spraying of water opens the pores of the concrete and allows the Underlayment to create a co-adhesive bond.





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**Coverage Rates:** 35 sf / bag over metal lath

\* Coverage rates will vary, this is an approximation only. Actual coverage will vary due to substrate conditions and surface porosity.

**Cure Time** 24 hours

**Shelf Life** 5 Years when properly stored.

**Storage** Store in a cool, dry place. Keep

from moisture.

Compressive Strength 8500 psi at 7 days

**Tools Required** 

5 gallon pail or Cut 55 gallon drum
Pump sprayer Paddle mixer attachment

Drill Trowel(s)

S-18000 Squeegee Straight edge / Smoother

Diamond crack chaser & grinder Plaster mixer

**Packaging** 50 lb. bags / 50 per pallet

**Appearance** Gray, powdered form

Odor None

**Specific Gravity** 3.15

**Percent Volatiles** 

by volume 0

### **CAUTION**

Keep away from children. Do not take internally. Always use safety gloves, appropriate eye protection, and appropriate OSHA/NIOSH approved respirator in areas with poor ventilation and when exposed to spray mist both indoors and outdoors. If ingested, seek medical attention immediately.

## LIMITATIONS:

Super-Krete Products are to be applied only when surface temperatures are above 55°F and rising and not to exceed 100°F. Super-Krete Products are not to be applied when precipitation is expected within 24 hours following completion of application. Do not allow materials to freeze. Each Super-Krete product acts as an inherent part of a proven system. Super-Krete Products are professional, contractor grade products. Training in the use of these products is available. Consult a Super-Krete Products representative for information and assistance locating approved contractors in your area or for training class dates.

## MOISTURE VAPOR EMISSIONS PRECAUTIONS:

All concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission that may lead to blistering and failure of the coating system. It is the coating applicator's responsibility to conduct calcium chloride testing in compliance with ASTM F1869, or relative humidity probe testing in compliance with ASTM-F2170, to determine if excessive levels of vapor emissions are present before applying any coatings. Arizona Polymer Flooring offers S-1300 Pene-Krete® for cementitious overlay products and VaporSolve® Moisture Remediation systems for resinous floor coatings. Consult our technical service department. Arizona Polymer Flooring and its sales agents will not be responsible for coating failures due to undetected moisture vapor emissions.

#### WARRANTY

Arizona Polymer Flooring guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. ARIZONA POLYMER FLOORING MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. Arizona Polymer Flooring shall not be liable for damages caused by application of its products over concrete with excessive moisture vapor transmission or alkalinity. Arizona Polymer Flooring shall not be liable for any injury incurred in a slip and fall accident. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product.



