

S-9600 Structural Mix™

TECHNICAL DATA SHEET

DESCRIPTION

S-9600 Structural Mix™ is a dry, pre-blended, ready-mixed cementitious product which is mixed with water only and is used for the repair of structurally damaged concrete substrates. S-9600 Structural Mix provides a co-adhesive bond with the substrate and provides a compressive strength of 8,500 psi while retaining flexibility to allow for structure movement and to resist cracking at the contact point. This product can be installed from 0" to any thickness in a flowable or dry pack consistency. S-9600 Structural Mix is used for repairing structural failures, for re-leveling and re-grading, and for both thin or deep-fill overlays. S-9600 Structural Mix is used for structural repairs of bridges, parking structures and many other cementitious substrates. S-9600 Structural Mix can be applied by squeegee, trowel or screed.

USES

Interior / Exterior Applications	Foundations
Bridges	Balconies
Highways	Structural Repairs
Parking Structures	Sidewalks
On-grade / Vertical/ Overhead Repairs	Anti-skid Textures
Driveways	Re-grading / Sloping
Curbs / Gutters	Filling Spalls / Low Spots
Shower / Shower Floor Grading	Dams / Water Tanks
Concrete Seawalls	Walls

ADVANTAGES

Flexible & Versatile	Water Resistant & Non-Reemulsifiable
Eliminates the Need for Concrete Removal	Resists Freeze / Thaw Conditions
Ready Mixed – Just Add Water!	Environmentally Friendly and Safe
Superior Bonding Capabilities	OSHA Compliant
Requires No Bonding Agents or Primers	Non-Skid Capabilities
Weather Resistant & Flexible	Waterproofs & Seals
Can Be Applied at Any Thickness	Unaffected by Salt Water in 1 hour
8,500 psi in 7 days	



CSI RELATED SECTIONS

03 53 00 - Concrete Topping	32 01 19.62 - Patching of Rigid Paving
07 11 16 - Cementitious Dampproofing	32 01 26.74 - Concrete Overlay
09 61 13 - Slip Resistant Flooring	34 01 00 - Operation and Maintenance of Transportation
09 97 26 - Cementitious Coatings	35 00 00 - Waterway and Marine Construction

GENERAL INFORMATION

Structural Mix is ready-mixed and only requires the addition of water when mixing. Structural Mix requires no primer, bonding agents or cementitious underlayments to ensure a bond. Structural Mix cannot be removed from the concrete substrate once cured, without removing the substrate that it is attached to. Structural Mix is a high-strength product that is very resilient and durable.

Before any Super-Krete products are applied over concrete, the slab must be free of sealers, any type of curing compounds and bond-breakers. Always refer to the Super-Krete Products Surface Preparation Guide for surface testing, cleaning, preparation and porosity requirements prior to applying Bond-Kote. **Arizona Polymer Flooring recommends that all Super-Krete cementitious overlay product applications, over concrete, first be treated with Pene-Krete.**

Important: Structural Mix is designed to penetrate the surface for a co-adhesive bond. Any sealers or coatings which will interfere with this penetration must be removed. The surface shall be cleaned thoroughly of all contamination by scrubbing with Super-Krete S-12000 Heavy Duty Degreaser™. Spray Heavy Duty Degreaser over the entire surface and allow it to dwell on the surface for approximately 15-30 minutes then, completely rinse with clean water two times. Allow Structural Mix to dry another 24 hours before applying other coatings or sealers. Extremely oily surfaces can be pre-heated with a propane torch to bring the oil to the surface, followed by degreasing and water blasting. Repeat this process until the surface is free of oily substances. Shot blast or grind the surface to insure porosity and penetration of product.

Super-Krete Products is a Division of Arizona Polymer Flooring, Inc.

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Super-Krete
Products
THE CONCRETE OVERLAY EXPERTS™

APPLICATION

Structural Mix is a very diversible product and is used to repair a multitude of concrete problems. Apply by squeegee, trowel, gauge rake as a self-leveling product, or pour-in-place.

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

Build-up Areas / Deep Fill Repairs: Structural Mix can be extended using up to 25 lbs. of $\frac{3}{8}$ " pea gravel rock or larger per 50lb. bag. Apply the mixture to low area and trowel, squeegee or screed mixture with a straight edge tool for desired surface finish.

Overhead Repairs: Overhead and vertical repairs can be applied by dry-packing material in layers or lifts. Pack material into repair with wooden float or trowel and shape material. A light mist of water may be sprayed onto surface for ease of finishing. Shotcrete equipment may also be used to apply Structural Mix.

Squeegee Coats: A squeegee mix should be used when resurfacing in thin layers. For squeegee applications the Structural Mix is mixed into a flowable consistency, the surface misted with water and the product spread with a squeegee over the surface. A squeegee coat can be applied as thin as $\frac{1}{8}$ " using a Super-Krete Squeegee™. After mixing and pre-wetting surface distribute material by pouring out of a 5 gal. pail onto the surface, spreading from one side of working area across to the other in a 6"-8" wide pour. Spread immediately with squeegee working material from side to side while working material towards nearest joint or end of work area. Material is best spread when squeegee is held at 45° to direction of travel. If Structural Mix begins to dry or leave a residue or curdle on surface, spray/mist area with water and squeegee the material until surface is uniform. 2 or more applications are typically required. To achieve a broom finish, apply 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 across Structural Mix in the desired direction of finish. Dragging the broom in an upside-down position allows broom to drag across the surface evenly without pulling the material and clumping.

Trowel Finish: After first coat, following directions above, material may be troweled to desired finish or texture. A trowel finish can be achieved by using a trowel instead of a broom to finish the second coat. For leveling or re-grading a surface, a flowable mix is normally used and the product screeded across the surface using a straight edge and finished with trowels. Super-Krete always recommends a light spray of water be applied to all concrete substrates prior to application of Structural mix. The spraying of water opens the pores of the concrete and allows the Structural Mix to create a co-adhesive bond. Should Structural Mix become unworkable simply spray a mist of water over the area and it will become workable.

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.

Manual: Add 4 quarts of clean water to a container such as a 5 gallon pail and add 1 (50 lb.) bag of Structural Mix 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 additional water as needed or when a flowable consistency is desired. For vertical or overhead repairs, a dry slump consistency is recommended (add less water). Structural Mix can be extended using up to 25 lbs. of $\frac{3}{8}$ " pea gravel rock or larger per each 50lb. bag for additional strength and fill.

Mechanical: Add required amount of Structural Mix 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 Structural Mix. For a wetter mix, add more water or less Structural Mix. 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 Structural Mix to maintain the desired thickness. If too much water is added, more dry Structural Mix may be added without affecting the integrity of the product. Do not over-dilute Structural Mix with water. Over-dilution is visible when sand fines begin to separate from the mix, causing them to settle to the bottom. $\frac{3}{8}$ " or larger gravel can be used for extending material and to increase the strength of the mix.

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Coverage

Approximately 25 sf per 50 lb. bag at 1/4" thickness.
**Coverage rates will vary, this is an approximation only. Actual coverage will vary due to substrate conditions and surface porosity.*

Shelf Life 5 Years when properly stored.

Storage Store in a dry place.
Do not expose to moisture.
Keep from freezing.

Compressive Strength 8500 psi at 7 days

Bond Strength 235 psi

Tools Required

5 Gallon Pail	Pump Sprayer
Drill	S-18000 Squeegee
Paddle Mixer Attachment	Trowel(s)
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 **Super-Krete® 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.

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