

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 and versatile	Water resistant and 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 and flexible	Waterproofs and 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

S-9600 Structural Mix is ready-mixed and only requires the addition of water when mixing. S-9600 Structural Mix requires no primer, bonding agents or cementitious underlayments to ensure a bond. This product cannot be removed from the concrete substrate once cured, without removing the substrate that it is attached to. S-9600 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 S-9300 Bond-Kote®. **Arizona Polymer Flooring recommends that all Super-Krete cementitious overlay product applications, over concrete, first be treated with S-1300 Pene-Krete®.**

Important: S-9600 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 S-1200 Heavy Duty Degreaser™. Spray S-1200 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 S-9600 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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APPLICATION

S-9600 Structural Mix is a very diverse product and is used to repair a multitude of concrete problems. Apply by squeegee, trowel or 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: S-9600 Structural Mix can be extended using up to 25 lbs. of 3/8" pea gravel rock or larger 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.

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 S-9600 Structural Mix.

Squeegee Coats: A squeegee mix should be used when resurfacing in thin layers. For squeegee applications, S-9600 Structural Mix is mixed into a flowable consistency. The surface is misted with water and the product is spread with a squeegee over the surface. A squeegee coat can be applied as thin as 1/8" using the S-18000 24" Squeegee™. After mixing and pre-wetting the surface, distribute the material by pouring out of a 5 gallon pail onto the surface, spreading from one side of the working area across to the other in a 6" to 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 S-9600 Structural Mix begins to dry, leave a residue or curdle on the surface, spray or mist area with water and squeegee the material until surface is uniform. Two 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 the direction of travel and pull across S-9600 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 is screeded across the surface using a straight edge and finished with trowels. It is recommended that a light spray of water be applied to all concrete substrates prior to application of S-9600 Structural Mix. The spraying of water opens the pores of the concrete and allows the material to create a co-adhesive bond. Should the material 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 S-9600 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). S-9600 Structural Mix can be extended using up to 25 lbs. of 3/8" pea gravel rock or larger per each 50 lb. bag for additional strength and fill.

Mechanical: Add required amount of S-9600 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 S-9600 Structural Mix. For a wetter mix, add more water or less product. 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-9600 Structural Mix to maintain the desired thickness. If too much water is added, more dry product may be added without affecting the integrity of the product. Do not over-dilute S-9600 Structural Mix with water. Over-dilution is visible when sand fines begin to separate from the mix, causing them to settle to the bottom. 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 <i>*Coverage rates will vary, this is an approximation only. Actual coverage will vary due to substrate conditions and surface porosity.</i>	Packaging	50 lb. bags / 50 per pallet
Shelf Life	5 Years when properly stored.	Appearance	Gray, powdered form
Storage	Store in a dry place. Do not expose to moisture. Keep from freezing.	Odor	None
Compressive Strength	8500 psi at 7 days	Specific Gravity	3.15
Bond Strength	235 psi	Percent Volatiles by volume	0
Tools Required		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.
5 Gallon Pail	Pump Sprayer		
Drill	S-18000 Squeegee		
Paddle Mixer Attachment	Trowel(s)		
Plaster Mixer			

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.

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