SAND TOPPING MIX

Portland cement and sand topping and repair mix for 2" or less overlays

1. PRODUCT NAME
Tech-Mix® Sand Topping Mix

2. MANUFACTURER
TCC Materials®
2025 Centre Pointe Blvd.
Mendota Heights, MN 55120 USA
Phone: 1.651.688.9116
Web: tccmaterials.com

3. PRODUCT DESCRIPTION
Tech-Mix Sand Topping Mix consists of a uniformly blended mixture of sand and Portland cement and other ingredients approved for use in high strength mortars. Tech-Mix Sand Topping Mix is formulated for placing concrete overlays from ½ in. to 2 in. (13-51 mm) thick. It is also used for building a brick or flagstone patio or walkway.

Features and Benefits
- Preblended mix
- Excellent workability
- High-strength

When/Where to Use
- Patching and leveling steps, walks, and floors
- Chimney caps
- Building a brick or flagstone patio or walkway
- Thick set beddings for ceramic tile floors
- Concrete applications from ½- 2 in. thick

4. TECHNICAL DATA
Meets or exceeds the requirements of ASTM C387 for Normal Strength Concrete.

Typical Values • Tech-Mix Sand Topping Mix	
Initial Set	1-2 hours
Final Set	3-5 hours
Compressive Strength, psi (ASTM C39)	
7 days	3,000 psi (17.2 MPa)
28 days	5,000 psi (27.6 MPa)

Greater than: > Greater than or equal to: ≥ Less than: < Less than or equal to: ≤
Note: Test results obtained under controlled laboratory conditions at 73°F (22.7°C) and 50% relative humidity unless otherwise specified.

Available Size
- 60 lb. (27.2 kg) bag (BOM #104880)

Coverage
- 60 lb. (27.2 kg.) bag yields approximately 0.50 cu. ft. (0.014 m^3) of wet concrete, or covers 15 sq. ft. (1.39 m^2) at ½ in. (13 mm) thick.
- 80 lb. (36.3 kg.) bag yields approximately 0.60 cu. ft. (17 L) of wet concrete, or covers 20 sq. ft. (1.86 m^2) at ½ in. (13 mm) thick

** All yields are approximate and do not allow for waste or job site conditions.*

5. INSTALLATION
Preparation
Read all directions before starting work. When using Tech-Mix Sand Topping Mix to resurface damaged concrete surfaces ½-2 in. (13-51 mm) thick, dig a small trench along the edge of the damaged surface so that forms can be set in place level with the old concrete surface. It is important to form a solid base for the new topping. Remove all broken and loose concrete. All surfaces must be structurally sound. Remove all dust, waxes, sealers, old adhesive residue, curing compounds, oils, or other foreign materials prior to application. Clean the surface thoroughly with a concrete cleaner such as ProSpec® Concrete / Masonry Restoration Cleaner. Consider using ProSpec Air Entrainment for exterior work subject to freezing.

Note: It is the responsibility of the installer/applicator to ensure the suitability of the product for its intended use.

Mixing

Approximate Water Amounts for Mixing		
Bag Size	**Starting Water Amounts**	**Final Maximum Water Amounts**
60 lb. (27.2 kg)	3 qt. (2.8 L)	4.5 qt. (4.3 L)
80 lb. (36.3 kg)	4 qt. (3.8 L)	6 qt. (5.7 L)

Machine Mixing:
1. Mix in a barrel-type concrete mixer or a mortar mixer. Choose the mixer size most appropriate for the size of the job. Allow at least ¾ cu. ft. (21 L) of mixer capacity for each 60 lb. (27.2 kg.) bag, or at least 1 cu. ft. (28 L) of mixer capacity for each 80 lb. bag of Sand Topping Mix to be mixed at one time.
2. Using the chart for approximate water amounts, add starting amounts of potable water to the mixer. Turn on the mixer and begin adding bags of mix to the water.
3. Mix for 3-5 minutes to ensure a uniform, lump-free consistency. If the material becomes too difficult to mix, add additional water in small amounts until a workable mix is obtained. Do not overwater.
4. Place immediately. Keep mixing consistent from batch to batch

Hand Mixing:
1. Empty Tech-Mix Sand Mix bags into a suitable mixing container.
2. Using the chart for approximate water amounts, add starting amounts of potable water to the mixing container. Work the mix with a shovel, rake, or hoe. Add additional water in small amounts until a workable plastic-like consistency is obtained. Do not overwater.
3. Place immediately. Keep mixing consistent from batch to batch. Be sure there are no dry chunks of powder or standing water left in the mix.

Note: For patches 1 in. (25.4 mm) thick or less, replace 33% of the mixing water with ProSpec Mighty Bond (concrete bonding additive) for improved bonding and durability. (Approximately 1 qt. Mighty Bond, blended with 2 qt. clean water per 60 lb. bag of Sand Topping Mix.)

Application

Ideal application conditions are when air, material, and substrate temperatures are between 40°F-100°F (4°C-38°C) within 24 hours of application and placement, and when rain is not forecast 24 hours after. Set times will vary in extremely hot or cold conditions. Do not apply over concrete cured less than 28 days or surfaces that are frozen or contain frost.

Overlays and Repairs:

1. Using 2x4's and stakes, construct a form around the old sidewalk or slab. Use a level to make sure that the forms are set at the correct height and adequate slope for drainage.
2. Prior to material placement, dampen the area to be repaired with clean water to a saturated-surface-dry (SSD) condition. Improved bond may be achieved by mixing a slurry coat consisting of the Tech-Mix Sand Topping Mix powder and a 50/50 blend of water with ProSpec Mighty Bond concrete bonding additive to a pancake batter-like consistency and brushing it into the area being repaired. The repair overlay should be made before the slurry coat dries.
3. Place the Sand Topping Mix onto the prepared area. Using heavy trowel pressure, work the material into the surface of the damaged area then build up to the desired thickness. Consolidate and spread completely to fill the forms without air pockets. Trowel the surface smooth using a straight edge board, steel trowel, or wood float and allow the bleed water to evaporate.
4. Use a steel finishing trowel or wood float to remove surface imperfections and trowel to a smooth finish. If a skid-resistant finish is desired, wait until the surface is "thumbprint" hard and apply a broom finish. Pull the broom toward you using light pressure. Be sure to not overlap strokes. Edge using a concrete edging tool if desired.
5. If the topping is placed over an existing concrete joint, it is important to tool a joint into the mix directly over the existing joint. Use a trowel or jointer to form the joint at least half the depth of patch.

Building a Brick or Flagstone Patio or Walkway:

1. When installing a patio or walkway, be sure the sub grade is firmly compacted. Stake out the site and excavate deep enough to allow a 1 to 2 in. (25-51 mm) bed of mix beneath the brick or flagstone.
2. Construct an edging around the perimeter of the site using brick or concrete. Pour dry mix to a depth of 1 in. to 2 in. (25-51 mm). Using a 2" x 4" board, screed the mix level and then wet the surface with a fine mist. Dampen only an area that can be completed within 30 minutes.
3. Lay the bricks or flagstone outward from a corner. Check your alignment and level every 3 to 4 bricks or stones. Maintain a joint width of ½ in. (13 mm).
4. Sweep mix into the joints. Remove any excess mix from the paving surface. Note, any excess sand mix not removed from the paving surface can potentially discolor the paving bricks or stones.
5. Wet the joints with a fine mist of water. Once the joints are "thumbprint" hard, use a jointing tool or wooden dowel to smooth and seal the joints.

Finishing

Tech-Mix Sand Topping Mix can be broom finished or hand trowel finished. Specialty finishes, such as stamping, adding color or staining, are also acceptable. Power finishing is not recommended.

Curing

Concrete can be moist cured by keeping the surface wet with a lawn sprinkler or by covering the concrete surface with plastic sheeting. Curing with plastic or burlap can cause patchy discoloration of the repair. Make sure plastic sheets are laid flat, thoroughly sealed at joints and anchored carefully along edges. Curing should be continued for a period of 5 days in warm weather [70°F (21°C) or higher] or 7 days in cold weather [50°F-70°F (10°C - 20°C)]. Protect from freezing for at least 48 hours. Plastic sheeting and insulation blankets should be used if temperatures are expected to fall below 32°F (0°C).

Clean Up

Use soapy water to clean hands and tools immediately after use. Dried material must be mechanically removed. Use a waste water hardener (e.g. Congelz™ or similar product) for cementitious waste disposal.

Limitations

- Follow all industry standard safety procedures when working with concrete products including wearing impervious gloves, such as nitrile when handling.
- Maximum overlay thickness is 2 in.
- Do not add aggregate.
- Do not overwater. Do not exceed water limits listed when mixing.
- For best results, do not overwork the material.
- Set times will fluctuate in extremely hot or cold weather. Use cold water in severely hot weather; use hot water (not exceeding 120°F (48°C)) when mixing in severely cold weather.
- Always comply with the steel reinforcement requirements of applicable building codes for structural applications.
- The use of salts or de-icing chemicals are not recommended during the first winter season following installation.
- Sand Topping Mix should be installed in accordance with local building code provisions and all applicable ASTM standards.
- Good workmanship and proper detailing & design assures durable, functional, water tight construction.

Safety

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: tccmaterials.com

Cautions

Read complete cautionary information printed on product container prior to use.

This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered Tech-Mix brand product(s) under normal environmental and working conditions. Because each project is different, TCC Materials cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

6. AVAILABILITY

To locate Tech-Mix products in your area, please contact:
Phone: 1.651.688.9116
Email: info@tccmaterials.com

7. WARRANTY

Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, expressed or implied, including, but not limited to those concerning merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that Seller's liability to the Buyer shall not exceed the total amount billed and billable to the Buyer for the product hereunder.

Shelf Life	Best when used within one year in original, unopened bags
Storage Conditions	Store dry, cool, out of direct sunlight. Best to condition material to 50-80°F (10°-27°C) before using.
Color	Gray

WARNING: INJURIOUS TO EYES

KEEP OUT OF REACH OF CHILDREN

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