



# CRACK-RESISTANT CONCRETE MIX

Pre-blended, fiber-reinforced, Portland cement and sand mix for 1½" or greater depth

## 1. PRODUCT NAME

Tech-Mix® Crack-Resistant Concrete Mix

## 2. MANUFACTURER

Tech-Mix® is a registered trademark of TCC Materials  
2025 Centre Pointe Blvd., Suite 300  
Mendota Heights, MN 55120 USA  
Phone: 1.651.688.9116  
Web: techmixpro.com

## 3. PRODUCT DESCRIPTION

Tech-Mix® Crack-Resistant Concrete Mix consists of a pre-blended mixture of Portland cement, aggregates, air-entraining admixtures, special synthetic reinforcing fibers, and other ingredients to reduce shrinkage cracks and improve impact resistance. The special reinforcing fibers eliminate the need for wire mesh in typical slab-on-grade applications. Use for pouring concrete 1½ in. (38 mm) thick or greater. It is also used for building or repairing steps, walks, and floors.

### Features and Benefits

- Fibers added to reduce plastic and drying shrinkage, reducing cracks
- Preblended—just add water, mix, and use
- Increased impact resistance
- Air-entrained for improved freeze/thaw durability
- Eliminates the need for wire reinforcing mesh in many applications

### When/Where to Use

- Foundation walls and footings
- Driveway repairs
- Pipe and post footings
- Floor slabs and patios
- Forming splash-blocks and bird baths
- Appliance and equipment platforms
- Pools, ponds, and stepping stones
- Sidewalks, curbs, steps, and ramps
- Concrete applications of 1½ in. thick or greater

## 4. TECHNICAL DATA

Meets or exceeds the requirements of ASTM C387 for Normal Strength Concrete. Typical air content: 4-8%.

Typical Values • Tech-Mix Crack-Resistant Concrete Mix	
<b>Set Time (ASTM C403)</b>	
Initial Set	2-3 Hours
Final Set	3-5 Hours
<b>Compressive Strength (ASTM C109)</b>	
7 days	> 2,500 psi (17.2 MPa)
28 days	> 4,000 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 #110260)

## Coverage

- 60 lb. (27.2 kg) bag yields approximately 0.45 cu. ft. (12.7 L) of wet mortar. Coverage will vary based on waste and job site conditions.

## 5. INSTALLATION

### Preparation

Read all directions before starting work. Stake out the planned area and remove sod or soil to the desired depth. Nail and stake forms securely in place. Tamp and compact the sub-base until firm. Subgrade surface should be brought to a saturated surface dry (SSD) condition with potable water. All repair overlay surfaces must be sound and be clean of any contaminants. Dampen adjoining concrete surfaces to SSD condition with potable water. For increased bond to existing concrete, a latex bonding additive such as Akona Concrete Bonding Additive may be used.

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

### Forming

For rectangular slabs, construct forms out of 2 in. x 4 in. boards. For curbed slabs, use ¼ in. (6 mm) plywood for forms. Forms must be sealed to prevent material from escaping. Release agents are recommended for pre-treating wood form surfaces that can absorb moisture. The design of the form work should take into consideration the consistency of the mix, the method of placement and the distance the material must travel. Form sides must be squared off.

### Mixing

Mix only the amount of material that can be placed in 1-2 hours. The use of a barrel-type concrete mixer or a mortar mixer is recommended, although hand-mixing can also be used. Choose the mixer size most appropriate for the size of the job to be done. Allow at least ¾ cu. ft. (21 L) of mixer capacity for every 60 lb. (27.2 kg) bag of product. Always stir powder into the liquid for easier blending. Addition of cold water at high temperatures or warm water at low temperatures will aid in adjusting the mix temperature.

Approximate Water Amounts for Mixing		
Bag Size	Starting Water Amounts	Final Maximum Water Amounts
60 lb. (27.2 kg)	2.25 qt. (2.1 L)	3 qt. (2.8 L)

### Machine Mixing:

1. Add approximately 2.25 qt. (2.1 L) of cool, clean potable water per 60 lb. (27.2 kg) bag to the mixer. Turn on the mixer and begin adding the bags of concrete. Mix for 3 - 5 minutes to a lump free consistency.
2. If the material becomes too difficult to mix, add additional water, up to a total of 3 qt. (2.8 L), until a workable mix is obtained. If a slump cone is available, adjust water to achieve a 2-3 in. (50-76 mm) slump, but do not overwater as this will reduce strength and increase permeability.
3. Do not re-temper, or exceed water limits.
4. Clean mixer often to prevent buildup of material.

### Hand Mixing:

1. Empty concrete bags into a suitable mixing container. For each 60 lb. (27.2 kg) bag of mix, add approximately 2.25 qt. (2.1 L) of clean water.
2. Work the mix with a shovel, rake, or hoe and add water as

needed until a stiff, moldable consistency is achieved not to exceed 3 qt. (2.8 L) of water. Be sure there are no dry chunks of concrete left in the mix.

**Note:** Do not leave standing puddles or unmixed lumps

## 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 72 hours thereafter. Do not apply in direct sunlight on hot, windy days or when rain is forecasted within 24 hours. 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.

## Pouring a slab:

1. Dampen the sub-grade before concrete is placed. Do not leave standing puddles. Shovel or place mixture immediately into pre-dampened area, fill full depth of the form. Slab work, such as sidewalks and patios should be at least 4 in. (10 cm) thick.
2. After concrete has been consolidated and spread, completely fill the forms without air pockets, strike off and float immediately. To strike off, use a straight board (screed), moving the edge back and forth with a saw-like motion to smooth the concrete. Float the surface to level any ridges and fill any voids left by the straight edge. Cut the concrete away from the forms by running an edging tool or trowel along the forms to condense the slab edges.
3. For best results, cut control joints 1 in. (25.4 mm) deep every 6-8 ft. (1.8-2.4 m) using a grooving tool
4. Allow concrete to stiffen slightly, waiting until all surface water has evaporated before troweling or applying a broom finish. Initial set time at 72°F is 2-3 hours, final set is 3-5 hours. For best results, do not overwork the material

## Curing

To help prevent premature drying and improve mortar strength, moist cure for with a consistent mist or fogging spray for 48 hours after the initial set (2-4 hours) If conditions are very hot, dry, or windy, a drape of plastic sheeting over the wall will help retain moisture; if the surface begins to appear dry, remove the plastic, mist/moisten the surface and replace the plastic. Curing with plastic can cause patchy discoloration of the repair. Make sure plastic sheets are laid flat, thoroughly sealed at joints and anchored carefully along edges. Protect concrete from freezing during the first 72 hours. Full cure is reached after 28 days.

## 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.
- Do not exceed water limits when mixing.
- Minimum overlay thickness is 1½ in. (38 mm).
- Do not add aggregate.
- 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.

- Install in accordance with local building code provisions and all applicable ASTM standards. Good workmanship and proper detailing and design assures durable, functional, construction.
- Mixing time and water amounts should be consistent from batch to batch.

## Safety

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: [techmixpro.com](http://techmixpro.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  
Website: [techmixpro.com](http://techmixpro.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.

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

**WARNING: INJURIOUS TO EYES**

**KEEP OUT OF REACH OF CHILDREN**



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