



PREMIUM CONCRETE COUNTERTOP MIX

Fast-setting, high-strength, pourable mix

1. PRODUCT NAME

TechMix® Premium Concrete Countertop Mix

2. MANUFACTURER

TechMix® is a registered trademark of TCC Materials
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3. PRODUCT DESCRIPTION

TechMix Premium Concrete Countertop Mix is a fast-setting, high-strength mix specially formulated to create countertops, outdoor kitchen tops, bar or table tops, workbench or utility tops. This product can also be used to produce precast wall caps, mantel or lintels for many different applications. Premium Concrete Countertop Mix needs only water to produce an easy-to-use, pourable mixture that can be de-molded in 18-24 hours. This mix is intended for reverse-cast application using 3/4" Melamine coated particleboard which creates a very flat and smooth surface without grinding and polishing, but it is also suitable for cast-in-place installation with standard finishing techniques. Refer to the "Notes" section of this data sheet for additional information on cast-in-place installations.

Features and Benefits

- Polymer modified
- Air entrained, freeze thaw durable for exterior use
- High strength: 4000 psi @ 24 hours, 10,000 psi @ 28 days
- Self-leveling consistency
- Can be demolded in 18-24 hours
- Just add water

When/Where to Use

- Precast countertops
- Outdoor kitchen tops
- Bar or table top
- Workbench or utility top
- Precast wall caps
- Precast mantels
- Precast lintels

4. TECHNICAL DATA

Typical Values • Tech-Mix Premium Concrete Countertop Mix	
Compressive Strength, psi (ASTM C109)	
24 hours	≥ 3,000 psi (20.6 MPa)
28 days	≥ 10,000 psi (68.9 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

- 50 lb. (22.7 kg) bag Gray (BOM #103434)
- 50 lb. (22.7 kg) bag White (BOM #104082)

Coverage

- Each 50 lb. (22.7 kg.) bag will yield approximately 1/3 cu. ft. of wet concrete

To determine how much material is required for a project, calculate the volume in cubic feet. Multiply the length by the width by the thickness of the finished countertop for volume in cubic inches, then divide the sum by 1728 for cubic feet.

As an example, a countertop that will be 36" long x 24" deep x 2" thick will need 1 cubic foot of wet countertop mix-calculation: (36 x 24 x 2)/1728 = 1 cubic foot. Each 50 lb. bag will yield approximately 1/3 of a cubic foot. Therefore, for every cubic foot this would require 3 bags of product.

CONCRETE TOP SIZING CHART				
	24"L x 24"D	48"L x 24"D	36" L x 12"D	36"L x 24"D
QUANTITY OF 50 LB. (22.7 kg) BAGS				
1.5" Thick	1.5	3	1.125	2.25
2" Thick	2	4	1.5	3
3" Thick	3	6	2.25	4.5

Note: All yields are approximate and do not account for waste or uneven forms, etc.

5. INSTALLATION Preparation

Read all directions before starting work. The minimum temperature for pouring into molds is 60°F (15.5°C), and should remain at or above 60°F for 3-4 days during curing.

1. For the reverse-cast technique, make a form for your countertop using 3/4" Melamine coated particleboard. Cut strips for the sides 1 1/2-3" wide to match the desired countertop or precast piece thickness. Drill pilot holes on the side boards from the top down and assemble the side panels to the bottom panel using 1/2" longer screws than the side rail (ex. 2" rail = 2 1/2" screws). Fasten the sides of the form to the base using coarse screws allowing for the depth of the countertop and fastening securely to the base. Fasteners should be located every 6-8" around the perimeter. *Note: If the countertop will be positioned against walls that may not be square, we recommend creating a template out of cardboard first and positioning the sides to match the template.*
2. Sink cut-out (if required otherwise skip to step #3): Make a sink cut-out by using extruded foam equal to the depth of the form. Use a jigsaw with a metal cutting blade or a hack saw blade with handle to form the cut-out. The cut-out should be sanded to remove any rough spots and taped carefully with clear packing tape. Smooth out any air bubbles, etc. as they will transfer to the sink opening. Faucet templates can be made using PVC pipe wrapped in thin sill plate foam and wrapped with clear packing tape using the same procedures used for the sink. Attach the sink cut-out and faucet pieces to the foam base using black silicone caulking. Also run a bead of silicone caulking around the inside seams of the countertop form. Smooth with a moistened fingertip once to get a uniform appearance. *Note: using painters tape to protect the caulking area will speed the process. Allow surface of silicone caulking to dry for at least 1 hour prior to pouring mix into the form. Remove tape after caulking and clean any silicone residue off the form with a razor blade to reduce imperfections in the top of the finished product.*
3. Reinforcement: In many applications, it will be desirable to use wire mesh or rebar for added strength and durability. It is especially recommended in applications that will endure

heavy-duty use or force. Cut a piece of welded wire mesh 2" smaller than the interior of the form and 2" away from any sink or faucet cut outs. On precast pieces larger than 42" or over 2" thick #3 rebar should also be used. Make sure to have a minimum of ¾" clear concrete cover over any reinforcing for exposed surfaces to prevent shadowing from rebar. Using wire ties, attach the rebar to the welded lath. Suspend the reinforcements near the middle of the height of the forms using wire ties attached to the side forms using screws. Place painter's tape over the screw heads to create ease in disassembling the form. Level form with wooden shims prior to pouring.

4. It is best to vacuum and wipe down the inside of the form with a clean rag and warm water or acetone. Use of other cleaning products can leave streaks and residue on the form that you may not be able to see until the top is removed from the mold. Thoroughly dry the inside of the form prior to pouring the mix. Do not apply a form release agent to the melamine.

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

Mixing

1. For small tops, 36" or less, a ½" drill (600 RPM or less) and a paddle in a 5 gallon pail may be used. For larger applications, a mortar mixer capable of mixing several bags at once may be helpful, however mixing time will double due to the slower rpm's. Do not use a barrel mixer.
2. Place approximately 5-6 pints (2.3-2.8 L) of clean water into mixing container for each 50 lb. bag of Premium Concrete Countertop Mix, then slowly add powder to achieve a uniform mix. Mix for 3 minutes. Mix time is critical, do not cut it short. When using a drill mixer, use caution not to entrain air or pinholes into the surface.
3. Let product sit and rest for 2 minutes undisturbed. Then, remix the product for 2 minutes until a flowable consistency is obtained. When mixed with the proper amount of water, the mixture will be quite fluid, yet will not start to separate or segregate.
4. If color is desired, add dry powder pigment or liquid colorant to the mix water. Mix consistently so the pigment is evenly mixed. A general recommendation for adding 1 pint liquid pigment is to less the amount of liquid pigment to the overall mixing water. So if the liquid pigment is ½ solids and a ½ pint water, subtract ½ pint water from the 5 - 6 pints of recommended mixing water. Do not overwater.

Application

Ideal application conditions are when air, material, and substrate temperatures are between 60°F-90°F (15.5°C-32°C) during application and 3-4 days thereafter. Set times will vary in extremely hot or cold conditions. Do not use material below 50° F (10°C) as the plasticizing admixtures will not work as well and mixture will not be as pourable as intended.

Make sure the form(s) are level prior to pouring mixture. Fill the pre-made form with the mixture making sure it fills in around any reinforcement and around all cutouts. Vibrate the form by tapping with a rubber mallet around all the edges or by using a palm sander without any paper on it. We recommend 7-8 tapping sessions every 6". This is an important step to remove tiny bubbles in the mix and minimize pinholes in the precast surface.

Curing

After the material in the form has begun to take a set, normally 1 hour, snip off the wire ties holding the wire mesh just below the surface of the countertop mix. If needed, screed the back

off, using a 2"x4" moving it in a sawing type movement against the top of the side forms. Cover the countertop mix with plastic and allow it to cure 18-24 hours. Try to suspend the plastic so that it does not touch the cement allowing it to air-cure.

After 18-24 hours, remove the plastic from the countertop surface and remove all the screws holding the form together. The countertop will still be very fragile so use care in removing forms. If necessary, use small wooded shims to help remove the sides of the form. Put down some small pieces of foam next to the base of the form. Then hold the base of the form and the countertop, lift the countertop onto the foam in a vertical position. Gently remove the bottom of the base and gently remove any cut outs. Using caution lay the top down on foam scraps with the surface of the countertop up. Using a sanding block smooth all the edges and remove any imperfections/defects.

Finishing

The surface of the countertop can be wet polished or cleaned and sealed, as is, depending on the desired appearance. Follow all instructions for the sealing products used. If pinholes are present use Rapid Patch Feather Edge Pro to fill any pinholes or to touch up any imperfections or defects along the edges prior to finishing.

Notes for use with cast-in-place installation:

Although Premium Concrete Countertop Mix is designed for easy use with a reverse-cast method, it can be mixed to pour as a cast-in-place countertop. When making larger countertops or working in limited spaces, the cast-in-place method can be the best option, but will require polishing or honing for a smooth finish.

- Do not pour in place over untreated OSB, plywood, or cement board as these substrates are too absorptive and will pull water out of the mix which leads to shrinkage cracks. Use Melamine coated particle board as the substrate, or use two coats of ProSpec Waterproofing & Crack Isolation Membrane to coat the forms.
- Reduce the mixing water to 5 pints (2.3 L). The mix will not be as runny, but still have good flow.
- Final surface finishing by polishing or honing our Premium Concrete Countertop Mix can be started approximately 18-24 hours after pouring the top (begin after removing the forms). Polishing is usually done with diamond wheels, either immediately after removing the forms, or within 2-3 days of removing them, depending upon drying conditions.

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 overwater, do not exceed water limits listed for mixing.
- Minimum thickness for interior application is 1½" when fully supported by structural underlayment material; Minimum thickness for exterior use is 2" when properly supported; Maximum thickness is 8".
- 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.
- If using a partial bag of powder, dry blend the full bag first in case of any settling during transport.

Safety

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

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 or White

WARNING: INJURIOUS TO EYES

KEEP OUT OF REACH OF CHILDREN



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