DIY Concrete Countertops

Pour your own white concrete countertops right on top of your base cabinets. We poured about 12' of countertop for a small kitchen using cement board, countertop forms and a white countertop mix.



Before (left) and after (right)

Tools

- [ ] Caulk gun
- [ ] Utility knife
- [ ] Miter saw
- [ ] Jig saw
- [ ] Keyhole saw
- [ ] Impact driver or cordless drill
- [ ] Tape measure
- [ ] Mixing drill with a paddle bit
- [ ] 5 gallon buckets
- [ ] Screed (a straight board as long as your countertop is deep)
- [ ] Magnesium float and steel finishing trowel
- [ ] Margin tool or putty knife
- [ ] Sanding block
- [ ] Orbital sander with 80, 120 and 220 grit discs
- [ ] Shop vac
- [ ] Foam roller (for the sealer)

Supplies

- [ ] 1/4" cement board (or 1/4" Hardie backer)
- [ ] 1 1/2" styrofoam (for sink and appliance cutouts)
- [ ] Scrap wood (to reinforce the cabinets)
- [ ] EuroForm Square Edge Countertop Form

- [ ] 3/8" construction screws
- [ ] 2" screws
- [ ] White Countertop Mix, 1 bag per 2 to 3 feet of countertop
- [ ] Bright White Color-Pack, 1 per bag of mix
- [ ] Z Clips
- [ ] FG50 Fiber Mesh Reinforcement
- [ ] Z Aqua-Poxy sealer
- [ ] Silicone adhesive and waterproof silicone caulk
- [ ] Duct tape
- [ ] Plastic sheeting and drop cloths

Cost

Item	Cost
EuroForm (90" half package)	$139
White Countertop Mix	$29 a bag
Bright White Color-Pack	about $8 each
Z Clips	$20
Fiber mesh	$50

Prices from Concrete Countertop Solutions and can change. This plan contains affiliate links. If you buy through one, I earn a small commission at no extra cost to you.

Step 1: Reinforce the cabinets

The 1/4" cement board can feel flimsy spanning the cabinet openings, so screw temporary 1×4 blocking across the center of each cabinet. You'll take it out after the countertop sets, so make sure you can reach the screws from underneath.

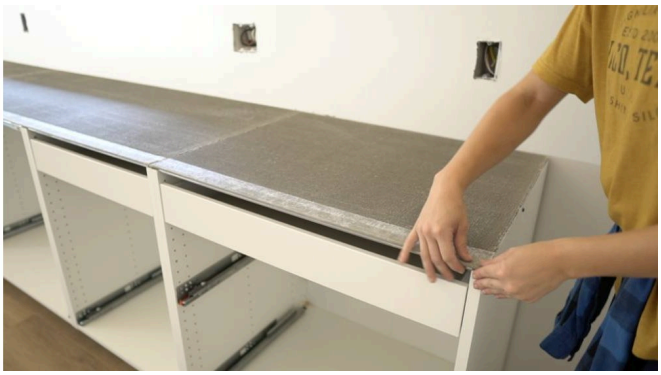
Cover the cabinets with plastic and lay drop cloths on the floor in case of spills.



Step 2: Measure and cut the cement board

Cut the cement board so it sits flush with the front edge of the cabinets. Score a line with a sharp utility knife, then snap the board over your knee. If you need to splice two boards, put the seam over a cabinet frame, not over an opening.





Step 3: Secure the cement board

Dry fit the cement board, then glue it to the tops of the cabinets with silicone adhesive. Cover all the seams with duct tape.







Step 4: Install the countertop forms

I used the EuroForm Square Edge form. It has a 1 1/4" front edge, but you only pour 1" of concrete. For a small kitchen, the 90" half package (four 90" EuroForm pieces and four 90" back wall pieces) was plenty.

1. Miter one end of a 90" EuroForm piece at 45 degrees on the miter saw.
2. Screw it down with the 3/8" screws every 6 to 8".
3. Cut a test piece for each corner so the miter is tight, then tape the whole corner seam with duct tape. Tape any other seams too.
4. Install the back wall pieces. I notched a tiny bit off the back piece so it fit closer to the EuroForm. Screw it down every 6 to 8", pushing it tight against the wall.
5. Tape the inside edge of the whole form to the cement board so no concrete can seep underneath.

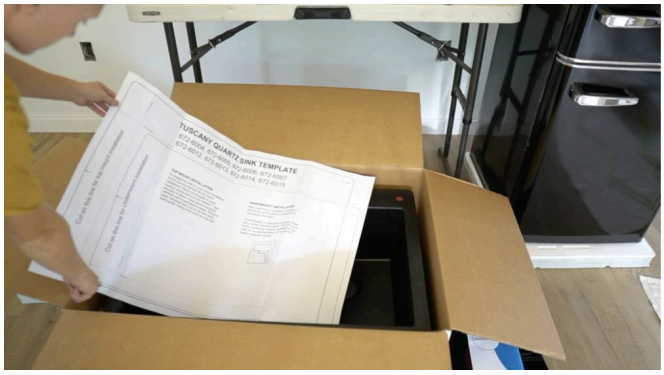


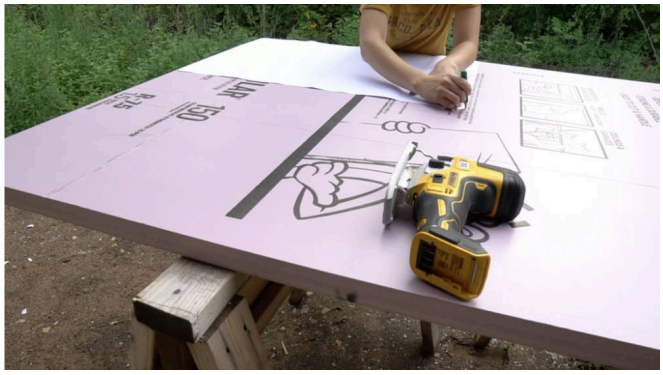
Step 5: Make forms for the sink and appliances

We had a drop-in sink and a cooktop. Use the paper template that comes with a new sink, or measure, and leave a little wiggle room around the cooktop. Double check that the faucet fits in the sink opening.

Transfer the measurements to the 1 1/2" styrofoam, cut each shape with a jig saw, then center the foam on the cement board and screw it down at an angle with 2" screws.

If you have an undermount sink, Concrete Countertop Solutions has tutorials for other form types.









Step 6: Install the Z Clips and mesh

Roll out the fiber mesh and cut it to size with scissors. Attach the Z Clips to the mesh, then screw the clips into the cement board with the 3/8" screws. The mesh reinforces the concrete, and the clips keep it from floating to the top when you pour.







Step 7: Mix and pour

For each bag of White Countertop Mix:

1. Put 2 1/2 quarts of water in a bucket and set another 1/2 quart aside.
2. Mix in one Bright White Color-Pack first, then slowly add the bag of countertop mix while mixing.
3. When the mix starts to tighten up, slowly add the extra 1/2 quart of water.
4. Once everything is combined, mix for 1 more minute until it's flowable.

We used 5 bags and 5 Color-Packs for about 12' of cabinets. Pour a bucket, spread it out, and mix the next bucket right away. Our first batch was a little firm, so we added a bit more water to the rest. The mix is nearly self-leveling.

Run a screed across the top of the forms a few times to level the concrete and bring the water to the surface. We skipped this and ended up with low spots where the white coloring puddled, so don't skip it. Fill any low spots with more concrete.

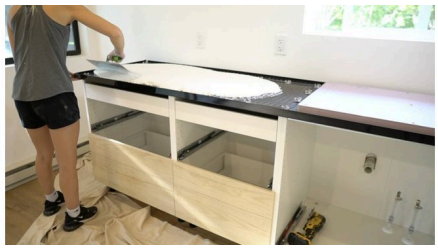
Fill right to the top of the forms, then tap the forms with the end of your margin tool to vibrate out trapped air. You'll see the bubbles rise and pop.

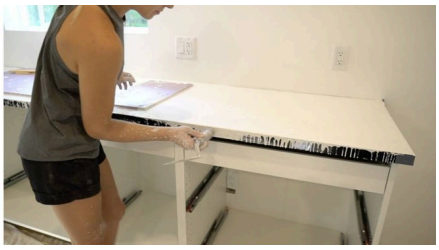












Step 8: Smooth the surface

Once the concrete has stiffened a bit, smooth and flatten it with a magnesium float. When it's set enough that you can barely leave a fingerprint, finish it with a steel trowel.

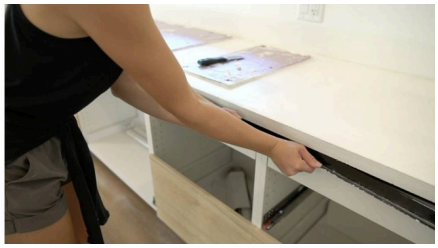



Step 9: Remove the forms and foam

Let the concrete cure for 24 hours. Then:

1. Sand the top of the forms with a sanding block to clean off any concrete stuck to them, so the edge doesn't chip.
2. Run a margin tool or putty knife along the seam to separate the form from the concrete.
3. Snap off the front half of the form at its break point.
4. Remove the screws from the styrofoam, cut an X in the foam, dig out a hole, and pull the foam up.
5. Cut the sink and cooktop openings with a keyhole saw.
6. Remove the temporary blocking from under the cabinets.



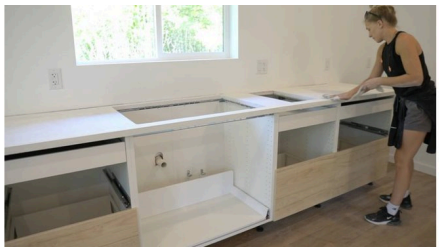





Step 10: Sand and seal

Smooth any bumps with an orbital sander, working through 80, 120 and 220 grit. Hook the sander to a shop vac to catch the dust. Lightly sand the edges and corners so they aren't sharp.

Wipe the countertops down with a wet rag to remove all the dust. Tape off the wall, then roll on 3 coats of sealer with a foam roller, sanding very lightly between coats. Finish with a bead of waterproof silicone caulk where the countertop meets the wall.







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- DIY Countertops Under $60 (wood)