

# Countertop Mix Datasheet

October 2018

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**Countertop Mix** is a 3 component pre-casting mix that contains a proprietary blend of cements, and other admixtures to produce a high strength countertop.

## Technical Data

Type	3 part casting mix
Colour	White and Grey (used in conjunction with ColourCem)
Pot life	45 minutes
Working time	45 minutes
Initial set	1 hour
Mixing water temperature	10°C to 25°C
Application temperature (ambient)	10°C to 25°C
Substrate temperature	10°C to 25°C
Minimum application thickness	20mm
Maximum application thickness	Can go to 40mm but check aggregate grading
Density	2.3kg/litre
Protection during application	Sun and wind barriers

## Purpose

**Countertop Mix** is used to provide a decorative countertop suitable for use in commercial, residential and restaurant use.

## Specifying

A trial sample should be made up prior to the installation of the piece to approve colour and finish. Use all materials, tools, and techniques for the actual job in the mock-up. Consistent batching, pouring, finishing, curing, sealing and preparation techniques will ensure the uniformity of countertop piece. Future maintenance requirements should also be discussed.

## Limitations

Ambient temperature must be higher than 10°C. Protect from freezing for at least 6 hours after application. Avoid application in direct sunlight to minimize premature drying.

Shelf life - 6 months from date of invoice when stored in original, unopened containers, in a dry place.

## Site work

### Surface Preparation

Be sure all surfaces of the mould are clean and free of any imperfections that you do not want on your finished product. All seams must be tight to prevent seepage of the **Countertop Mix** using silicon & a caulking gun. If caulk or any other fillers are used on the mould they must be fully hardened and dry before **Countertop Mix** is poured.

### Mixing

The use of a mechanical mixer is essential. Dry mix your **Countertop Mix** with the chosen colour/s of ColourCem and stone first before adding water. **Countertop Mix** can be coloured by using ColourCem with a ratio of 20kg **Countertop Mix** to a maximum 1kg of ColourCem. Maximum 5kg of extra aggregate per 20kg bag of **Countertop Mix** can also be added. If **Countertop Mix** is used on its own, 2 litres of water per 20kg bag is recommended. If extra ColourCem and aggregate is used then extra water will be required to obtain the desired consistency.

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## Application

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### Placement

Pour mixture immediately into the centre of the already prepared level mould. Work the material to the edges of the mould by puddling the mixture with a float or gloved hand. If multiple batches of material are required due to the size of your piece no more than 5 minutes may elapse between placement of each batch. Vibrate the mould to ensure the material has properly levelled and let air bubbles escape if any are present. Be careful not to over vibrate this will separate the fine material from the coarse materials in the mould, resulting that the coarse material has no cement. Once the mixture has been consolidated it should be screeded level and covered with poly sheeting or shrink wrap.

### Reinforcement

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The use of steel reinforcement adequate to support both dead load and live load is required on any piece, shape, or structure that is unsupported or cantilevered out from the edge of a supporting structure or is used to support the weight of any person or persons. Lack of adequate reinforcement could cause bodily harm if a piece or structure should break and fall. Steel reinforcing must be coated with a primer e.g. Direct-To-Metal Paint to prevent rusting. Galvanized reinforcing need not be primed.

1. 50mm x 50mm x 3mm welded wire mesh works well for counter thicknesses up to 50mm.
2. Use extra welded mesh below surface at all re-entrant corners and narrow strips, i.e. sink and range areas.
3. The placement of the reinforcing will differ from top to top depending on the loads and supporting structures. Please do research in this regard.

### Curing

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After the product is placed in the form and properly consolidated and the mix has begun its initial set, cover with plastic sheeting and leave for one day. The next day remove the plastic sheeting, mist spray, and recover with the plastic allowing the moisture to stay in the top for at least 3 - 4 days.

### De-moulding or stripping shutter

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The countertop may be de-moulded or stripped after 4 days of curing at normal temperatures. At lower temperatures, 15 degrees and lower, the de-moulding time is extended. Gloves should be worn when stripping or de moulding. Depending on the size of the mould assistance may be required, tilt the mould on its side and support the countertop in order not to fall out of the mould. Lower the mould slowly to the surface where it is going to be placed for polishing. Once the mix has reached the surface you can now pull the mould free. If casted in a shutter the shutter must be stripped section by section. If the correct release agent was used the shutter should strip easily.

The top should be placed on wooden strips so that the air can circulate around the top, this will prevent uneven drying and possible warping. Leave to air cure for at least one day prior to polishing.

### Polishing

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If grinding and polishing is required wait a minimum of 1 day after de-moulding and test the casting for strength and hardness before any polishing. Surface may be densified and polished (using Cemcrete's Potassium Densifier as per datasheet) without grinding if non-exposed aggregate look is desired. Wait a minimum of 72 hours prior to application of any stain product.

Start polishing with a diamond cup wheel or something equivalent, this will help with the levelling and breaking the surface without using up your diamond pads. Use either wet or dry pads. Depending on the finish you want, start at 50 grit then 100, 200, 400, 800, 1500 and end with a 3000 grit.

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Remember to retain 1kg of the original dry powder mix per square meter of countertop to fill in any shrinkage, cracks or pin holes at the 200 grit stage. This powder must be sieved through a stocking as only the fine coloured powder is required. This powder is then mixed with FlexBond diluted 1:3 with water into a paste and used to fill any pinholes by using a rubber squeegee to work into the holes. Allow this at least 4 hours to dry.

Use the Potassium Densifier once 200 grit has been used and once again at the 400 grit stage. Follow manufacturers recommendations for use.

Once the final polishing grit has been reached it is recommended to use either bees wax or carnauba wax to further protect the top from stains.

## Maintenance

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Periodically inspect the countertop surface for wear or damage. All concrete curing and sealing compounds will eventually exhibit the effects of weathering and abrasion. For maximum coating life and performance, wipe up all spills as soon as possible. Remove abrasive debris by wiping or vacuuming. Do not drag, drop or place sharp edges on the surfaces. Do not place extremely hot items directly on the surface. Periodic washing with mild detergents will help maintain surface lustre. Do not use solvent, acid or alkaline based cleaning materials for general cleaning. Prior to recoating the countertop with a sealer or a wax type finish, the surface must be clean, dry and free from cleaning product residue or other contamination and loose materials, which will affect the adhesion of sealer or wax.

## Sealing

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If you would rather apply a topical sealer instead of densifying, DO NOT polish past the 200 grit stage. After the 200 grit stage seal the countertop with 2 - 3 coats of Cemcrete's CreteSeal Solvent-Based Sealer or any other suitable sealer. It is encouraged for all owners to use hot pads and cutting boards to avoid damaging the sealer.

## Coverage

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4 bags of **Countertop Mix** with 4kg's of ColourCem and 20kg of say 5/6mm of coloured stone will yield a countertop of: 1m x 1m x 40mm thick.

Without extra aggregate or ColourCem will yield a countertop of: 1m x 1m x 30mm thick.

## Packaging

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**Countertop Mix** is supplied in 20kg bags.

ColourCem supplied in 1kg bags & 25kg drums.