

## GRC Pro + MACT Mix Design

### OVERVIEW

GFRC, or Glass Fibre Reinforced Concrete, uses glass fibres instead of steel for reinforcement. It has high strength-to-weight ratio, durability and versatility. Mixing GFRC requires careful mixing and proper safety measures to ensure a successful outcome.

#### Safety First

Caution: GFRC mixtures contain fine powders that can irritate the eyes, lungs, and skin, so handle the materials with care.

- Work in a well-ventilated area
- Gloves, safety glasses and a mask are essential

**Cast a small sample first** and familiarise yourself with the product - better to lose 1/2 a bag of premix than a whole benchtop!

### STEPS

1		<p><b>Prepare</b></p> <p>Carefully weigh all ingredients before mixing. You will need:</p> <ul style="list-style-type: none"> <li>• premix</li> <li>• colour</li> <li>• plasticizer</li> <li>• water</li> <li>• fibres</li> </ul> <p>Exact amounts depend on the type of mix required. Recommended amounts are listed in the guide.</p>
2		<p><b>Combine premix, colour &amp; plasticiser</b></p> <p>Mix these three ingredients in a separate bucket to ensure an even consistency. This will help prevent clumping and ensure an even distribution of the colour.</p>
3		<p><b>Add 80% dry mix to water</b></p> <p>Blend until it has a smooth and consistent texture.</p>
4		<p><b>Add remaining dry mix</b></p> <p>Continue to mix until smooth and even. Scrape down the sides and bottom of the bucket to ensure all the materials are mixed thoroughly.</p>
5		<p><b>Adjust the consistency with plasticiser</b></p> <p>If the mix is too thick to pour, add additional plasticiser, not water. Adding water will change the colour of the mix and make matching colours impossible.</p>
6		<p><b>Add fibres</b></p> <p>Once the mix is at the desired consistency for pouring, add the fibres and mix thoroughly for optimum strength and durability.</p>

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## TIPS & TRICKS

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- **Use quality mixing gear** to ensure that your mix is properly blended and reduce the likelihood of errors and inconsistencies.
- **Adjust for temperature:** Below 15°C use water to make the mix more flowable, but do not dry mix plasticizer as the dosage will be greatly reduced. Above 24°C cool down the mix by replacing some of the water with ice (1kg of ice and 2kg of water is recommended). Pour in the cooler times of the day (below 24°C) to give more work time before initial setting. This will help ensure that the mix sets properly and does not dry out too quickly.
- **Always use caution** when working with any product that produces dust and to work in a well-ventilated area with appropriate PPE.
- **Experiment with different fibres** and additives to achieve different textures, colours and finishes. As with any new skill, practice is key, and the more you work with GFRC, the more comfortable and confident you will become in your mixing abilities.

**Don't be afraid to experiment, and very soon you'll be creating beautiful, strong concrete creations.**

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## MIXES

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### Flowable Mix

1. 20kg MACT Premix
2. 3L Water
3. 20g Plasticiser
4. 350g 13mm Bundled Fibres
5. Colour
6. Omit fibre from face coat

### Sprayable Mix

1. 20kg MACT Premix
2. 2.9L Water
3. 10g Plasticiser
4. Colour
5. Omit fibre from face coat

### Hand Packed

1. 20kg MACT Premix
2. 2.5L water
3. 300g 13mm Bundled Fibres
4. Omit fibre from face coat



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