

Fishstone GFRC Mix – General Instructions



Overview

Fishstone GFRC Mix is a versatile, easy to use bag mix which contains everything to create high performance concrete. Whether it is an artistic or functional piece Fishstone's GFRC mix will be the right choice.

GFRC:

Glass Fiber Reinforced Concrete (GFRC, also known as GRC in certain parts of the world) is a type of fiber reinforced concrete with exceptional strengths. Predominately known for its use on exterior building facades and architectural elements has recently found its way into artisan concrete for its superior finish, durability, diversity and strength.

Fishstone has taken the guess work out for you when making a high performance mix. Fishstone GFRC Mix contains sand, cement, pozzolan, plasticizer (water reducer), shrinkage reducer, defoamers & surfactants.

Versatility:

Fishstone GFRC mix can be used in a many applications. With some simple process changes/modifications you can achieve diverse mix consistencies from dry hand pressed mix to a highly fluid self-consolidating mix. This mix can be sprayed, poured, pressed, or even a terrazzo mix making it a perfect choice for all your concrete projects.

Properties:

Fishstone GFRC MIX is a preblended easy to use bag mix, simply add water and fibers. No need to measure batching many items, the waste from the need to buy more raw materials than needed for a job, the risk of miscalculations and faulty scales. Fishstone GFRC MIX is proven mix from a trusted source.

Technical Info:

- Coverage: One bag will cover approximately 9 square feet at 1/2" thick or 4.5 square feet at 1" thick.
- Contains 22.5lbs cement per 50lb bag of GFRC Mix.
- Standard color is white (add up to 2.25lbs pigment for desired color).

Instructions for use:

The instructions below are a very basic overview of the use of this bag mix. There are many other uses, techniques and possibilities with our GFRC Mix. If you are interested in exploring more visit our website www.concretetopcountersupply.com for more information and details to training opportunities.

Safety

Be sure to read and follow all instructions on label and always wear an appropriate respirator, eye protection & gloves when handling material. Refer to product Safety Data Sheet (SDS) for further information.

Materials Needed:

- 45lb GFRC bag mix
- 1.5lb AR Glass Fibers(For backer coats)
- Optimum 380 premium Superplasticizer (water reducer)
- Large Mixing bucket (7 gallons or larger)
- Mixer
- GFRC Compaction Roller
- Safety gear: Gloves, dust mask, eye protection, etc...

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Step 1 (Mixing material)

In a clean mixing bucket add 8lbs (approximately one gallon) water per 45lb bag of GFRC Mix. Add approximately 80% of GFRC mix to water and mix well until homogenous...then add balance of GFRC mix to mixing bucket and continue blending until homogenous. The ideal mix consistency should be similar to a thin & creamy milkshake.

Adding color: Fishstone GFRC mix is an off-white color and can be modified by adding up to 2.25lbs of Fishstone's integral powder pigment. *It is recommended to dry blend the pigment with the mix prior to adding water.*

Note: For a dryer mix start with 7.5lbs water. For a wetter mix start with 8lbs then sparingly add Optimum 380 water reducing admixture to desired consistency(Optimum 380 adds fluidity to mix without having to add more water which can weaken the mix). We recommend not adding more than 8.5lbs. water.

Step 2 (spraying/ pouring face coat)

Apply face coat by spraying with a hopper gun or pour into mold (drier mixes will be pressed into mold to create a unique look). Face coat should be thin (1/8" or less). If applying thicker use of a PVA fiber should be used to help prevent shrinkage cracking. Be sure to work up any side walls.

Important note: GFRC consists of a face (we call it the beauty coat) and backer coats. The face coat is the finished surface you will see when you remove your casting from the mold (usually has no fibers or if it does will be the PVA type fiber which are small enough that cannot be seen in the finished surface). The backer coat which contains the heavy glass fibers provides the strength (primary reinforcement) in GFRC.

Step 3 (applying backer coats)

The backer coat is the structural coat and contains a heavy load of Alkali Resistant Glass Fiber. These fibers provide the excellent strength in GFRC.

For Backer mixes, add premeasured 1.5lbs AR Glass fiber per 50lb bag after mix has been thoroughly blended. Do not over-mix fibers. The fibers should be thought of as folding them into an already thoroughly blended mix. The idea is to just fully envelope each fiber with cement paste.

Note: Adding the fibers will tighten up the mix so it is a good idea to make the mix slightly wetter than you ultimately want.

The Backer coat should be added after the face coat has begun to set up but not dry (Usually this is when slight pressure from your finger has minimal distortion to the face coat). It is important that there is a good bond between the face coat and backer coats. An air pocket between coats will result in a weak spot that can be easily ruined in the finished product.

Backer coats can be added in layers (approximately ¼ - ½" at a time) and compacted using a GFRC compaction Roller or can be poured in (Premix self-compacting/consolidating...ie: wetter mix) to desired height thickness.

Step 4 (curing)

When you are done casting cover the piece with a sheet of plastic to hold the moisture in allowing the concrete to cure & hydrate properly. Keep covered for a minimum of 24hours. It is recommended to keep covered for 48-36 hours and misting with water daily prior to demolding.

Step 5 (removing from mold and processing)

After a minimum of 24 hours you may demold but keep in mind the concrete is still young and won't develop ultimate strength for 28days. It is advised to at minimum sand with a 220 grit abrasive or clean off any residue with a mild acid like Fishstone's Clean & Etch.

Step 6 (Sealing)

For ultimate stain protection we recommend sealing using a good concrete sealer. We recommend U-Seal which has proven to work extremely well with our GFRC Mix.

Start small and think big

If this is your first time working with this material we highly recommend testing first. Start with something small like a stepping stone. Once you get use to the mix and process it's time to tackle that big project. *"The best way to learn is to roll up your sleeves and start mixing & pouring...."*. Fishstone also offers training via phone consultation and hands-on group & private training (contact Fishstone for more information).