

ContecFlow GM202

Single Component Free-Flowing Micro-Concrete

Description:

ContecFlow GM202 is supplied as a ready to use blend of dry powders which requires only the site addition of clean water to produce a free-flowing, shrinkage compensated micro-concrete suitable for large volume concrete repairs at nominal thickness in excess of 100 mm.

The material is based on graded aggregates and additives which impart controlled expansion in both plastic and hardened states while minimizing water demand.

Its low alkali content minimizes the risk of alkali-silica reaction. The hardened product exhibit excellent thermal compatibility with concrete and outstanding water repellent properties. The low water requirement ensures fast strength gain and long-term durability.

Uses:

The highly fluid nature of **ContecFlow GM202** obviates the need for compaction and vibration even where access to the repair zone is restricted or where reinforcement is congested. The product is ideal for the reinstatement of large, structural sections of concrete as well as for many smaller locations where difficulties of access make hand or trowel-applied mortars impractical. It is suitable for use where excellent chloride and carbon dioxide resistance is required or for repairs to concrete affected by alkali-silica reaction.

ContecFlow GM202 is alkaline in nature and will protect embedded steel reinforcement.

Properties:


Appearance	Grey, granular powder
Compressive Strength (N/mm ²)	Days N/mm ²
	1 35
	7 50
	28 70

Advantages:

- ✦ Dual expansion system compensates for shrinkage in the plastic and hardened states.
- ✦ Self-compacting nature eliminates honeycombing and displaces air without vibration.
- ✦ High strength and low permeability provide maximum protection against carbon dioxide and chlorides.
- ✦ Pre-bagged to overcome site-batched variations– only the site addition of clean water is required.
- ✦ Contains no chloride admixtures.

Preparation:

The unrestrained surface area of the repair must be kept to a minimum. The formwork should be rigid and tight to prevent loss of material and have properly sealed faces to ensure that no water is absorbed from the repair material.



Provisions must be made for suitable access points to pour or pump the mixed micro-concrete into place.

Saw cut or cut back the extremities of the repair locations to a depth of at least 10 mm to avoid feather-edging and to provide a square edge. Break out the complete repair area to a minimum depth of 50 mm up to the sawn edge.

Clean the surfaces and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion, deposits or algae. Where breaking out is not required, roughen the surface and remove any laitance by light scabbling or grit-blasting.

Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser. The effectiveness of decontamination should then be assessed by a pull-off test.

Expose fully any corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Grit-blasting is recommended for this process.

Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water immediately after grit-blasting to remove corrosion products from pits and imperfections within its surface.

Surface Priming:

Several hours prior to planning, the prepared concrete substrates should be saturated by filling the prepared formwork with clean water.

Immediately prior to the application of **ContecFlow GM202**, any excess water should be removed.

Mixing:

Care should be taken to ensure that **ContecFlow GM202** is thoroughly mixed.

A forced-action mixer is essential. Mixing in a suitably sized drum using an approved spiral paddle in a slow speed (400/500 rpm) heavy-duty drill is acceptable. Free-fall mixers must not be used. Mixing of part bags should never be attempted.

It is essential that machine mixing capacity and labor availability is adequate to enable the placing operation to be carried out continuously. Measure from 4 to 5.5 liters of clean water and pour three-quarters into the mixer. With the machine in operation, add one full 25 kg bag of **ContecFlow GM202** and mix one minute before adding the rest of the water. Mix for a further 2 to 3 minutes until a smooth even consistency is obtained. Note that powder must always be added to water. The quantities mixed may be scaled up as required. When the drill and paddle mixing method is used, the complete added liters of water should be placed in the mixing drum. With the paddle rotating, add one full 25 kg bag of **ContecFlow GM202** and mix for 2 to 3 minutes until smooth even consistency is obtained. It is recommended that the mixed product to be passed through a suitable coarse metal screen prior to placing or pumping to highlight any unmixed material.

Placing:

The mixed material should be placed within 30 minutes of mixing in order to gain the full benefit of fluidity and of the expansion process.

Curing:

The formwork should be left in place within 48 hours of placing.

Being a cement-based material, **ContecFlow GM202** should be cured immediately after the formwork is stripped off either with water or a liquid curing membrane such as **ContecKure 115**.

Cleaning:

ContecFlow GM202 should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Estimating:

Supply

ContecFlow GM202	25 kg bags
ContecKure 115	200 liters plastic drums

Coverage & Yield

ContecFlow GM202	Approx.12.5 liter per bag
ContecKure 115	3-5 m ² / liter

Note: The coverage figures are theoretical and also do not include wastage & depend on nature of substrate.

Shelf Life/ Storage:

ContecFlow GM202 has a shelf life of 12 months if kept in a dry store in the original, unopened bags.

Safety Precautions:

ContecFlow GM202 does not fall into the hazard classification of current regulations. However, it should not be swallowed or allowed to come into contact with eyes. Suitable protective gloves and goggles should be worn.

Splashes on the skin should be removed with water. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately – do not induce vomiting.

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