Cempatch Tie Hole Filler

High strength, rapid set mortar for tie hole filling



DESCRIPTION

Cempatch Tie Hole Filler is a single component, polymer modified, fiber reinforced, rapid curing cement based repair mortar.

Cempatch Tie Hole Filler is supplied in powder form, ready to use with the addition of water to provide a durable, rapid setting, high strength and easy to apply mortar with excellent low sag properties.

APPLICATIONS

Cempatch Tie Hole Filler can be applied to fill insitu tiebar holes formed by formwork bolts in new construction, in addition to sealing grout holes and voids around fixings in pre-cast concrete elements.

ADVANTAGES

- Easy to apply. Single component, requires only addition of water.
- » High bond strength, ensuring monolithic performance of the repair.
- » Fast set.
- » Durable.
- » Waterproof seal which withstands upto 5 bar water pressure after only 72 hours curing.
- » Low permeability to water, providing excellent protection to steel reinforcements and host concrete.
- » Excellent low sag properties.
- » Chloride free.
- » Enhanced tensile and impact strength.
- » Suitable for use in contact with potable water.
- » Cost effective, usually no special priming or preparation is required.

STANDARDS

- Cempatch Tie Hole Filler complies with the requirements of BS EN 1504-3 Class R4 for repair principles 3.1, 4.4, 7.1, and 7.2.
- Cempatch Tie Hole Filler complies with the requirements of BS 6920 for the suitability of the product for use in contact with water intended for human consumption.

METHOD OF USE

SUBSTRATE PREPARATION

All surfaces must be clean and free from dust, oil, grease, paints, or any loose material. Needle gunning or bush hammering should be done to provide clean substrates. The strength of the concrete sub-base should be a minimum of 20 N/mm².

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TECHNICAL PROPERTIES. W/P = 0.13

Colour:	Grey	
Fresh wet density:	2.22 ± 0.10 g/cm ³	
Mixing ratio:	3.25 litre of water for 25 kg bag of Cempatch Tie Hole Filler	
Working time:	10 - 12 min @ 20ºC	
Final setting time:	20 - 30 min	
Flexural strength: BS 6319-3	≥ 10 N/mm² @ 28 days	
Application temperature:	3 to 40°C	

Performance Characteristics	EN 1504-3 Requirement for Class R4	Measured Value
Compressive strength: BS EN 12190	≥ 45 N/mm² @ 28 days	≥ 30 N/mm² @ 1 day ≥ 55 N/mm² @ 28 days
Adhesion bond: BS EN 1542	≥ 2 N/mm²	≥ 2 N/mm²
Chloride ion content: BS EN 1015-17	< 0.05%	≤ 0.04%
Thermal compatibility: freeze-thaw cycling EN 13687-1	≥ 2 N/mm²	≥ 2 N/mm²
Capillary absorption EN 13057	≤ 0.5 kg·m ⁻² ·h ^{-0.5}	≤ 0.5 kg·m ⁻² ·h ^{-0.5}
Carbonation resistance BS EN 13295	≤ Control concrete	Pass

All tie-holes formed by through ties should be clean, cut back any remaining plastic tubes at approximately 40 - 50 mm from the concrete face.

Note: To eliminate the possibility of water tracking around the plastic tube, it should be plugged with a proprietary stopper.



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PRIMING

Areas/holes to be repaired with Cempatch Tie Hole Filler should be soaked with clean water before applying the repair mortar. All excess water should be removed prior to applying Cempatch Tie Hole Filler.

MIXING

To ensure proper mixing, a mechanically powered mixer or drill fitted with a suitable paddle should be used.Only mix sufficient material as can be used within the working life of the material.

3.25 litre of clean water should be added to a clean container, the 25 kg powder is then added slowly to the water while mixing continuously with low speed mixer/drill (400 - 600 rpm). Mixing time should be continued for 3 minutes until a uniform consistency is obtained.

PLACING AND FINISHING

Cempatch Tie Hole Filler can be applied by trowel. The mixed mortar should be applied with firm pressure to fully compact the mortar and ensure good adhesion with the substrate.

Finishing and levelling may be carried out using a moistened trowel or steel float, troweling from the centre out towards the perimeter, working into the edges of the repair.

Notes:

- The completed surface should not be overworked. If the mortar begins to slump, allow to stabilise and refinish.
- » Cempatch Tie Hole Filler should not be applied at a thickness less than 5 mm.

CURING

As Cempatch Tie Hole Filler is a cementitious based material, it should be cured in a similar method to concrete. Is important that the surface of the mortar is protected from strong sunlight and drying winds. Curing can be conducted by using appropriate curing methods or polythene sheeting.

CLEANING

All tools should be cleaned immediately after application using fresh water. Hardened materials must be cleaned mechanically.

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PACKAGING

Cempatch Tie Hole Filler is available in 25 kg bags.

THICKNESSES AND SIZE LIMITATIONS

Cempatch Tie Hole Filler can be applied in a single application for sections up to 75 mm thickness. The thickness should not be less than 5 mm deep in all applications.

YIELD

Approximately 12.5 - 13 litre per 25 kg bag.

STORAGE

Cempatch Tie Hole Filler has a shelf life of 12 months from the date of manufacture if stored at temperatures between 2°C and 50°C in original unopened bags.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.

CAUTIONS

HEALTH AND SAFETY

Cempatch Tie Hole Filler may cause irritation to skin or eyes.

In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary.

For further information, refer to the Material Safety Data Sheet.

FIRE

Cempatch Tie Hole Filler is nonflammable.

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