

# Cempatch FS

One component fast setting repair mortar



## DESCRIPTION

Cempatch FS is a one component polymer modified repair mortar. Cempatch FS is composed of a blend of dry powders and selected aggregates which when mixed with water produces a self compacting, high early and ultimate strength repair mortar.

## APPLICATIONS

- » For all types of concrete elements where fast refurbishment is required for a quick return to service or traffic.
- » Concrete pavements.
- » Car parks and garages.
- » Airport runways and aprons.

## ADVANTAGES

- » Fast setting with high early strength development which facilitates quick return to service.
- » Extremely low shrinkage which reduces any potential cracking.
- » Easy to apply, single component, require only addition of water.
- » Extremely low permeability providing excellent protection to steel reinforcement and host concrete.
- » Self compacting. High bond strength without need for a primer.
- » Suitable for internal and external applications.
- » Vapour permeable.
- » Cost effective.

## METHOD OF USE

### SUBSTRATE PREPARATION

All damaged and deteriorated concrete should be cut back to reach sound concrete and/or to a minimum depth of at least 20 mm. Corroded steel reinforcement should be grit blasted to remove all rust traces.

In case of significant loss in the steel reinforcement cross section, the steel should be replaced. It is essential to remove all concrete form around exposed steel reinforcements by 10 mm.

The perimeters of the repair area should be saw cut to give a minimum depth of 20 mm. The prepared area should be cleaned thoroughly by brush and/or compressed air. A water tight formwork should be erected to avoid any grout loss.

## TECHNICAL PROPERTIES:

Compressive strength: ASTM C109/109M-02	≥ 15.0 MPa @ 2 hrs ≥ 30.0 MPa @ 1 day ≥ 45.0 MPa @ 28 days
Setting time :	
Initial	≈ 20 - 35 min @ 25°C
Final	≈ 35 - 50 min @ 25°C
Vehicular traffic time:	≈ after 2 hr
Pedestrian time:	≈ after 1 hr
Mixing ratio:	3.75 litre water for 25 kg bag Cempatch FS
Drying shrinkage: ASTM C157	< 500 microstrain
Minimum application temperature:	5°C

## PRIMING

All grit blasted steel reinforcement should be primed within 2 – 4 hours with one or two coats of zinc rich epoxy Repcoat ZR.

Areas to be repaired with Cempatch FS should be soaked with clean water for several hours before applying the repair mortar to ensure damp saturated substrate. All excess water should be removed.

Provided that the substrate has been thoroughly soaked with clean water, an independent primer is not normally required.

## MIXING

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used. 3.75 litre of clean water should be added to clean container. The powder is then added slowly to the water while mixing continuously with low speed mixer/drill (400 - 600 rpm). Mixing should be continued for 3 minutes until a uniform consistency is obtained.



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## PLACING AND FINISHING

Cempatch FS should be poured in a single continuous operation and within 8 - 12 minutes from mixing.

Depending on the surface texture required, the poured mortar may either smoothed by steel or wood trowel or broom finished using a suitable brush or roller when the repair mortar begins to set.

## CURING

Since Cempatch FS is a cementitious base material, it should be cured in a similar manner as concrete. Curing can be conducted by either using concrete curing compound such as Setseal 33 or by using wet hessian sheets and polyethylene.

## CLEANING

All tools should be cleaned immediately after use with fresh clean water. Hardened materials should be cleaned mechanically.

## PACKAGING

Cempatch FS is available in 25 kg bags.

## THICKNESSES AND SIZE LIMITATIONS

Cempatch FS can be applied in a single application for sections up to 100 mm thick. Minimum thickness is 20 mm. For sections deeper than 100 mm, to reduce the heat generated from the hydration process, 8 - 12 mm well graded washed aggregate should be added at ratio of 10 kg aggregate per 25 kg bag of Cempatch FS.

Cempatch FS horizontal surface of application area should not exceed 3 m<sup>2</sup>.

## YIELD

Approximately 12.5 litre/25 kg bag.

## STORAGE

Cempatch FS has a shelf life of 12 months from date of manufacture if stored at temperatures between 2°C and 50°C.

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

## CAUTIONS

## HEALTH AND SAFETY

Since Cempatch FS contains Portland cement and sand, Cempatch FS 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 advise.

For further information refer to the Material Safety Data Sheet.

## FIRE

Cempatch FS is nonflammable.

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- » Surface treatments
- » Grouts and anchors.
- » Concrete repair.
- » Flooring systems.
- » Protective coatings.
- » Sealants.
- » Waterproofing.
- » Adhesives.
- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.

### Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.