

CIKOPATCH FB EXTRA



High Strength, single component, fibre reinforced concrete and plaster repair mortar

Description

CIKOpatch FB Extra is a ready to use fibre reinforced non-shrink, cementitious non-sagging repair mortar for interior and exterior use to repair concrete and plaster, particularly for overhead and vertical surface repairs.

CIKOpatch FB Extra is a balanced blend of cement, microsilica, graded silica sand, cement replacements, rheology modifier, fibre and other special additives to maintain the properties of an ideal repair mortar. The product requires addition of water and proper mixing at site to produce a high performance non-sag repair mortar.

Properties & Advantages

- Single component system requiring only addition of potable water and mechanical mixing at site for usage
- Suitable for applications in ambient temperatures between 5 and 45°C.
- Resistant to chlorides and carbon dioxide.
- Low permeability resulting in high durability.
- Applicable in multiple layers having thicknesses ranging from 5 mm up to 150mm.
- high compressive and flexural strength
- Chloride free thus not harming metals and bars.
- Non sag and can be applied up to 75 mm in a single application for vertical applications

Application area

- All types of restoration work involving repairs on concrete and plaster.
- Vertical and overhead repairs.
- Building repairs
- Bridges and car park repairs.
- Pre-cast concrete parts.
- Repair of honeycombs in concrete.
- Tie rod patching & filling

Applicable standards

- Complies with Qatar Construction Specifications QCS.

Product Information & Physical properties

| Form | Powder |
|---|---------------------------------|
| Colour | Cement grey (standard) |
| W/P | 0.14-0.16 |
| Fresh Density | 2.2 ± 0.05 Kg/L |
| Working Time | 30-35 minutes @ 25°C |
| | 20-25 minutes @ 35°C |
| Compressive strength ASTM C109 Dry Curing (W/P=0.14) | ≥35 N/mm ² @ 3 days |
| | ≥55 N/mm ² @ 7 days |
| | ≥70 N/mm ² @ 28 days |
| Flexural Strength BS 4551/ ASTM C348 Dry Curing (W/P=0.14) | ≥4.5 N/mm ² @ 7 days |
| | ≥10 N/mm ² @ 7 days |
| | ≥10 N/mm ² @ 28 days |
| Water Permeability DIN1048 (28 days dry curing) | <5mm |
| Dry Shrinkage ASTM C157 (W/P=0.14) | <0.1% |

Yield

25 kg bag of CIKOpatch FB Extra mixed with 3.5 to 4 litres of water yields 13 to 13.5 litres of fresh mortar.

Application instructions

Surface preparation

All loose, spalled, honeycombed concrete and plaster must be removed out until a sound surface is reached. The area and depth of repair should always more than the damaged area and the reinforcement shall be exposed in case of corrosion. The shape of the prepared area must be always in the form of a square, rectangle or hexagon (but not round or oval) which provides additional support to hold the repair mortar. Clean the prepared concrete surface to remove loose and unsound material by water blasting or any other suitable means to make the surface free from loose materials and dust. A rough and sound surface is highly recommended.

Reinforcement protection

The exposed reinforcement must be cleaned and treated to remove rust by sandblasting and priming using zinc rich based epoxy primer or alternative suitable primer.

In case a good surface preparation is hard to achieve, it is recommended to treat the rusty or poorly prepared steel

with the suitable type of rust chelating product or rust converter.

Priming

The prepared concrete substrates must be dampened with clean water then primed with bonding agent CIKObond AC or CIKObond SBR using brush.

When higher bonding performance is required, it is recommended to apply CIKObond SBR in slurry form (SBR mixed with OPC at ratio of 1:2 respectively) over the dampened and well prepared surface using a brush and allow becoming tacky.

Mixing

Pour 3.5 to 4 litres of clean water in an empty clean pail of minimum capacity of 20L. Dispense the 25 kg bag of CIKOPatch FB Extra gradually into the mixing vessel containing the measured water whilst mixing using a heavy duty adjustable speed drill-paddle assembly. Mix the mortar at high speed for 4 to 5 minutes to get a homogenous and lump free mixture.

Note: In hot weather application, use chilled water of temperature below 20°C to extend the workability of the mixed material. The mixed mortar temperature shall not exceed 35°C for better performance.

Placing

Patch the mixed mortar on the tacky primed surface and fill the prepared out area using steel trowel. The mortar shall be placed before bonding agent dries. In case the bonding agent dries, reapply another coat. Allow the patching mortar to initially set (1 to 3 hours depending on prevailing ambient temperatures) then cut level and adjust the surface with the adjacent concrete using aluminium bar or any other suitable tool. Final finishing can be done in two different ways, for a smooth finish, use a steel trowel dampened with water and press firmly back and forth ensuring proper jointing with adjacent concrete. For a rough surface texture, use a dampened sponge over the surface in a rotational motion.

Curing

The repaired area must be treated immediately after finishing by applying one of the curing agents from CIKOcure wide range of products. Alternatively cover the repaired area using a polythene sheet to retain moisture for the first 20 to 24 hours then cure with water continuously for minimum 3 days as per the standard curing practices.

Precautions

- Ambient temperatures during application must be between 5^o C and 40^oC. In extreme harsh conditions consult CIKO technical support department for recommendations.
- Do not re-temper the mixed mortar with water after initial mix.

Packaging

CIKOPatch FB Extra is available in 25kg moisture resistant bags.

Storage

CIKOPatch FB Extra should be stored in its original packaging under enclosed shaded area away from direct sunlight, moisture or water at temperatures between 5 °C and 45 °C.

Shelf life

CIKOPatch FB Extra has a shelf life of 12 months if stored in accordance with CIKO instructions.

Health & safety

Use standard dust mask to avoid inhalation of dust. Powder when wet or moist can cause burns to skin and eyes which should be protected during use. If comes in contact with skin/eyes, flush with plenty of fresh water and seek medical advice.

Refer Material Safety Data Sheet for further details.

Technical Support

For any technical support, do not hesitate to contact CIKO team at any time as CIKO offers on and off site services to end users, specifier and contractors.

More from CIKO Middle East

A wide range of construction chemical products are manufactured by CIKO Middle East which includes:

- Concrete admixtures and additives
- Waterproofing and damp proof coatings
- Surface treatments
- Flooring and toppings
- Grouts and anchors
- Tile adhesives and grout
- Adhesives and bonding agent
- Concrete repair materials
- Protective coating
- Joint Sealants
- Moulding compounds

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