

CIKOPatch FB

Single component, fibre reinforced concrete and plaster repair mortar

Description

CIKOPatch FB 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 is a balanced blend of cement as a binder, microsilica, graded silica sand, cement replacements, rheology modifier, fiber and other special additives to maintain the properties of an ideal repair mortar. CIKOPatch FB is a ready to use material and need only addition of water at site to produce a high performance repair mortar.

Properties

- Single component system and only addition of water required at site.
- Suitable for all climates.
- Resistant to chlorides and carbon dioxide.
- Low permeability and hence durable.
- Can be repaired to a thickness from 4mm to 150mm in multiple layers.
- Good flexural strength
- Chloride free and will not rust or harm metal on contact.
- Frost and salt resistant.
- Can be applied up to 75mm in single shot.

Application area

- All types of restoration work involving repairs on concrete and plaster.
- Vertical and overhead repairs.
- Building repairs in coastal areas.
- Bridges and car park repairs.
- Potable water tanks.
- Pre-cast concrete parts.
- Repair of honeycombs in concrete.

Applicable standards

- Complies with Qatar Construction Specifications QCS.

Physical properties

Form	Powder	
Colour	Cement grey (standard)	
W/P	0.16	
Density	≈ 2150±50 kg / m ³ [fresh]	
Working Time	30 minutes	
Compressive strength ASTM C 109 (Dry curing)	3 days	≥30 N/mm ²
	7 days	≥40 N/mm ²
	28 days	≥50 N/mm ²
Flexural strength BS 4551 (Dry curing)	28 days	≥10 N/mm ²
	Anchorage Bond Strength BS5080-1 (20 mm anchor bolt embedded in CIKOPatch FB)	28 days ≥ 10KN
Water Permeability DIN1048	<5mm	
Dry Shrinkage ASTM C157	<0.1%	

Coverage / Yield

25 kg bag of CIKOPatch FB mixed with 4 to 4.5 litres of water, yield 13 to 13.5 litres.

Application instructions

Surface preparation

All loose, spalled, honeycombed concrete and plaster must be chiselled out until a sound surface is reached. The area and depth of repair should always be slightly more than the damaged area and the reinforcement shall be exposed in case of corrosion. The shape of the chiselled 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 chiselled 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.

Reinforcement protection

The exposed reinforcement must be cleaned and treated to remove rust by sandblasting/shot blasting 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 chiselled concrete substrates must be dampened with clean water and primed with bonding agent CIKObond AC by using brush.

Alternatively CIKObond SBR mixed with OPC to form slurry may be applied for better bonding strength requirements.

Mixing

CIKOpatch FB is a ready to use material and only addition of 4 to 4.5 litres water is required for mixing each 25 kg bag of material. Dispense CIKOpatch FB slowly into the mixing vessel containing measured water and start mixing using a heavy duty slow speed drill- paddle assembly. Mix the mortar for 5 minutes to get a homogenous and lump free mixture.

Note: In hot weather application, use chilled water to extend the open time of the mixed material.

Placing

Place the mixed mortar on primed surface and fill the chiselled out area using steel trowel. The mortar shall be placed before bonding agent gets dried. Never apply CIKOpatch FB on dried bonding agent. Finishing must be done in similar way as that of normal plaster.

Curing

The repaired area must be cured as per the standard curing practice or apply one of CIKOcure wide range of products.

Precautions

- Application temperature must be between 5^o C and 40^o C.
- Do not re-temper mortar after initial mix.

Packaging

CIKOpatch FB is available in 25kg moisture resistant bags.

Shelf life

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

Storage

CIKOpatch FB should be stored under cool enclosed shaded area.

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