

UniPatch® 610

Shrinkage compensated, cement-based, free flowing micro concrete

Description

UniPatch 610 is a single component, cement-based, polymer modified, shrinkage compensated repair mortar. When mixed with water, it provides a free-flowing micro concrete. After drying, it gives a high strength repair mortar with excellent bond properties to concrete and steel reinforcement. **UniPatch 610** is a durable, low permeability chloride free mortar. It is suitable for concrete repair application in thicknesses more than 40 mm.

Features and benefits

- Polymer modified. No primer is required.
- High compressive strength, high bond strength and low permeability.
- Shrinkage compensated.
- Highly flowable. Suitable for repair of steel congested areas.
- Self-compacting. Complete filling of spalled/damaged concrete.

Recommended for

UniPatch 610 is suitable for structural repair of concrete elements where self-compacting application shall take place such as foundations, retaining walls, columns, beams, ceilings, pre-stressed concrete elements ...etc.

Composition

UniPatch 610 is composed of high strength Portland cement, well graded silica sand & natural aggregate and compound of chemicals to improve adhesion and workability.

Packaging

UniPatch 610 is available in 25 kg bags.

Coverage

13 – 13.5 liters/25 kg bag.

Note:

Coverage rate takes no account of wastage and may vary according to surface condition and application method.

Technical data

Mixed density	2.3 kg/liter
Compressive strength ASTM C109	>35 N/mm ² @ 3 day
	>45 N/mm ² @ 28 days
Flexural strength	>6 N/mm ² @ 28 days
Pull-off BS 1881-Part 207-1992	>1 N/mm ²
Pot life	60 minutes @ 20°C
Application thickness	>40 mm
Grain size	<5 mm
Appearance	Grey powder

Surface preparation

Substrates to be repaired must be clean, sound, dust free and un-contaminated. Any adhesion reducing materials such as bitumen, oil, grease, paint, curing compound, mould oil, laitance or any material that may impair the adhesion of the **UniPatch 610** must be removed by suitable means.

The perimeter of the damaged area should be marked and saw cut to a depth of 10 mm. Remove the defected concrete to a minimum thickness of 10 mm. Mechanical surface preparation is recommended. Surface should be roughened and open-pored.

If steel reinforcement is corroded, extend removing the concrete ensuring that the back of the steel is exposed. Remove the rust from the steel reinforcement using suitable method such as wire brushes, suitable power tools, grit blasting ...etc. It should be cleaned to Swedish Standard SA 2 ½. If steel reinforcement is severely corroded causing significant loss in its cross section, consult structural engineer as it may require replacement and/or adding new steel bars.

Wash the prepared surface to provide saturated surface dry condition.

Priming

All prepared steel reinforcement should be primed within 2 - 4 hours using **UniGuard 606**.

Mixing

UniPatch 610 micro concrete can be obtained by mixing a 25 kg bag of **UniPatch 610** with approx. 4±0.25 liters of clean water.

Mix using slow speed drill fitted with suitable mixing paddle or a high shear stationary mixer. Partial small quantities may be mixed manually using suitable hand tools.

Damp down the inside of the mixer with water prior to mixing the first batch. Ensure that the mixer is damp but free from standing water.

In hot weather, use chilled water. The temperature of the mixed mortar should not exceed 30°C. In cold weather, use warm water. The temperature of the mixed mortar should be above 10°C. Add the premeasured quantity of water into the mixer and then add the powder component slowly while mixing. Mix for 5 minutes minimum till a fully homogeneous, lumps-free micro concrete is achieved without segregation or bleeding.

Application

UniPatch 610 should be applied in a single continuous operation. The mixed materials should be poured slowly to avoid air entrapment.

Curing

As with all cement-based products, good curing is very important to ensure that the optimum characteristics are obtained. Always cure with tap water. Begin curing as soon as the final finish is achieved. Cover the work with plastic sheet fixed over wet hessian. Keep damp for 5 days.

Cleaning

Clean tools with water immediately after use. Hardened materials should be cleaned mechanically.

Storage and shelf life

To maintain its quality and suitability for use, the product should be stored in its unopened packaging, off the ground on pallets or similar structures, in a cool and dry environment. When stored under these recommended conditions, the product remains suitable for use for 12 months from the manufacturing date stated on the packaging.

Health and Safety

This product contains cement which may cause skin irritation. It may cause allergic skin reaction and eye damage. Avoid breathing dust. Wear protective gloves, eye goggles and clothing. In case of skin contact, wash with plenty of water. In case of eye contact, rinse continuously with water for several minutes and seek medical attention. Dispose excess material to special waste collection point in accordance with local & national regulation. Keep out of reach of children.

For further information, please ask for Safety Data Sheet for this product.

The most up-to-date TDS can be obtained from ACC Customer Service Department, or downloaded from our website: www.acc.com.eg.

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- Waterproofing.
- Flooring.
- Tile Adhesives & Grouts.
- Concrete Repair.
- Non-Shrink Grouts.
- Bonding Agents.
- Exterior Façade Coatings.
- Premixed Fairing Coats, Renders & Mortars.
- Putties (stucco).
- Sealers & Emulsion Paints.