



ADHERE BONDS
The Versatile Construction Chemicals



ADHERE - Micro Concrete

FLOWABLE MORTAR FOR REPAIRS OF DAMAGED REINFORCED CONCRETE MEMBERS

Description

ADHERE Micro Concrete is a ready to use dry powder which requires only addition of clean water at site to produce a free flowing non shrink repair micro concrete. It is composed of good quality cement, properly selected aggregates & additives. It is used & designed for repairing of damaged reinforced concrete elements like columns, beams & structure where the areas are restricted or not easily accessible for proper placement of concrete using vibrator. ADHERE Micro Concrete has excellent flowability, workability & proper particle size to reach small & congested reinforcement.

Specification

ADHERE Micro Concrete meets the requirement of ASTM C 109: 99, ASTM C 307, BS 1881 Part 207

Areas of Application

- ✚ Repair of damaged reinforced concrete elements like beams, columns, wall, etc. where access is restricted and compaction is not possible.
- ✚ For Jacketing of RCC columns to increase load-taking capacity (strengthening of a vertical members)

Features & Benefits

- ✚ Pumpable - Can be pumped or poured into restricted locations.
- ✚ Flowable - Flowable mortar hence does not require compaction.
- ✚ Shrinkage compensation – Controlled expansion system which compensates for shrinkage and settlement in the plastic state.
- ✚ Strength - Develops high initial and ultimate compressive strength.
- ✚ Moisture resistant - Offers excellent resistance to moisture ingress.
- ✚ Durability - Makes repaired sections highly durable & compatible to parent concrete.
- ✚ Thickness build up - Can be applied at 100 mm thickness at one stroke
- ✚ Chloride content - Contains no chloride based additive so prevents corrosion of reinforcement.
- ✚ Early reinstatement - Rapid strength gain helps in early reinstatement & removal of shuttering.

Method of Application

1 SURFACE PREPARATION

- ✚ Clean the surface and remove loose concrete, dust, oil, paint, grease, waterproof coating, etc.
- ✚ Expose fully any corroded steel in the repair area and remove all scale and corrosion deposits. Light shot blasting is highly recommended. Apply ADHERE Micro Concrete Rust Remover for rust free bars.
- ✚ For Cathodic Protection, apply ADHERE Micro Concrete Epoxy Zinc Primer over the cleaned re-bars and allow it to dry before pouring of ADHERE Micro Concrete.
- ✚ Saturate the substrate with water to prevent absorption of water from the mixed material.
- ✚ In case of a very old concrete substrate, it should be primed by applying one coat of ADHERE Micro Concrete Epoxy Bonding Agent. Allow the bonding agent to reach tacky condition before pouring of mix concrete.

2 MIXING

- ✚ Use PAN Mixer for mixing of ADHERE Micro Concrete.
- ✚ Charge 85-90 % of clean & potable mixing water (3.75 to 4 liters per 25 kg bag) to a PAN Mixer.
- ✚ Start addition of Micro Concrete powder slowly under continuous mixing. Keep mixing for 2 minutes. Add balance quantity 15 – 20% of mixing water & again mix for another 2-3 minutes to form a homogeneous, free flowing, uniform & lump-free mix.

3 APPLICATION

- ✚ Pour or pump the mixed Dr. Fixit Micro Concrete into a watertight shuttering.
- ✚ Cure the repaired concrete for minimum 7 days before removing the shuttering or alternatively use Dr. Fixit Curing Compound for curing.

Precautions & Limitations

- ✚ ADHERE Micro Concrete can be applied in section upto 100 mm depth.
- ✚ For thickness more than 100 mm, addition of pre-calculated aggregates may be required. Consult technical team for more details.
- ✚ Strictly follow water-powder ratio as specified.
- ✚ Ensure that the shuttering is 100% watertight.
- ✚ Ensure full exposure of reinforced steel.
- ✚ Consult structural engineer if the diameter of rebar is reduced by more than 20% than the original diameter.
- ✚ Replacement or provision of additional steel shall be done in consultation with structural consultant.

Note:

Whilst any information and / or specification contained herein is to the best of our knowledge true and accurate, no warranty is given or implied in connection with any recommendation or suggestions made by us, our representatives, agents or distributors as the conditions of use of any labour involved are beyond our control.

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Technical Information

PROPERTIES	SPECIFICATION	RESULTS
Compressive strength @300C	ASTM C 109 : 99	15 N/mm ² at 1 day
		15 N/mm ² at 1 day
		30 N/mm ² at 3 days
		50 N/mm ² at 7 days
		60 N/mm ² at 28 days
Flexural Strength @300C	ASTM C 580	6 N/mm ² at 28 days
Tensile Strength @300C	ASTM C 307	2.5 N/mm ² at 7 days
Expansion	:	0.45%
Carbonation resistance	:	Passes the Accelerated Carbonation test
Water absorption after 24 hrs (%)	:	0.2
Chloride content	:	0.20%

PACKING

25 kg

Theoretical coverage

1.3 m² per 25 kg pack at 10 mm thickness

Yield - 13 ltrs at a water/powder ratio of 0.16 & Fresh Wet Density at 300C is 2230 kg/m³

Shelf Life & Storage

Shelf life is six months from the date of manufacturing. Store at cool & dry place in unopened condition.

Health & Safety Precautions

- ❖ As with all chemical products, caution should always be exercised.
- ❖ Protective clothing's such as gloves and goggles should be worn (see packaging for specific instructions).
- ❖ Treat any contact to the skin or eyes with fresh water immediately.
- ❖ Should any of the products be accidentally swallowed, do not induce vomiting but call for medical assistance immediately.

Other Product Categories Available

ADHERE Micro Concrete has wide range of Waterproofing & Construction chemicals which includes,

- Waterproofing Products
- Exterior Coating Products
- Repair Products
- Tile Fixing Range
- Sealants
- Concrete Admixtures
- Flooring Products
- Grouts

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