



## MICRO CONCRETE

### Flowable Mortar For Repairs To Damaged Reinforced Concrete Members

#### Description

Dubond's Micro Concrete is supplied as 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. This is a cementitious material, with additives, which impart controlled expansions characteristics in the plastic state while minimizing water demand. This is specially designed for repairs to damaged reinforced concrete elements, particularly where areas is restricted and where vibration of the placed material is difficult or impossible.

#### Areas of Application

- Repair to damaged reinforced concrete elements like slabs, 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 member)

#### Features & Benefits

- Can be pumped or poured into restricted locations.
- Flow able mortar hence does not require compaction.
- Develop high initial and ultimate final strengths.
- Offers excellent resistance to moisture ingress.
- Makes repaired sections highly durable
- Can be applied at 100 mm thickness at one stroke
- Contains no chloride admixture.
- Rapid strength gain to facilitate early reinstatement.
- Gaseous expansions system compensates for shrinkage and settlement in the plastic state.

#### Method of Application

- Clean the surface and remove loose concrete, any dust, oil, paint, grease etc.
- Expose fully any corroded steel in the repair area and remove all scale and corrosion deposits. Shot blasting is highly recommended
- Apply Dubond's Hydro Zinc Primer over the clean re-bars and allow dry before continuing.
- Saturate the substrate with water to prevent absorption of water from the mixed material of Dubond's Micro Concrete
- For a dry substrate, it should be primed by applying one coat of Dubond's Hydro Prime.
- Mix Dubond's Micro Concrete with water (3.75 to 4 liters per 25 kg bag) till homogeneous mix is obtained, at 30°C
- Mixing should be done thoroughly with a forced action mixer of adequate capacity, at least for 5 minutes.
- Pour or pump the mixed Dubond's Micro Concrete into a watertight shuttering in the repaired area, when primer area becomes tacky.
- Cure the repaired surface for minimum 7 days.

Before



After



**DUBOND®**

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## Precautions & Limitations

- Micro Concrete can applied in section up to 100 mm deep.
- For thickness more than 100 mm, addition of pre calculated aggregates may be required.
- Ensure that the shuttering is 100 % water tight.
- Ensure full exposure of reinforcement steel.
- Consult structural engineer if the diameter of rebar is reduced by more than 20% than original diameter.

## Technical Information

Compressive Strength After	01 Days ~11 Mpa 03 Days ~18 Mpa 07 Days ~21 Mpa 28 Days ~27 Mpa
Flexural strength After 28 Days	8.5 MPA
% water absorption after 24 hrs	0.45
Chloride content	NIL
Depth of carbonation, mm	Passes the accelerated carbonation test
2 Hours	NIL
4 Hours	NIL
Coefficient of thermal expansion	$10-12 \times 10^{-6} / ^\circ\text{C}$
Yield	13.5 liters
Coverage	1.3 m <sup>2</sup> per 25 kg packet 10 mm thickness

## Packing

25 Kg.



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