

MICRO CONCRETE

PRODUCT

General purpose, non-shrink, cementitious micro concrete.

ADVANTAGES

- High Early Strength: Reaches the strength of main structural member in 24 hours only.
- Non Shrink: It does not produce shrinkage cracks along the line of old and built-up concrete section.
- Impermeable: The repaired part of structural member become impermeable to water and protects the reinforcements from any further corrosion.
- Chemical Structure: MICRO CONCRETE does not require elaborate curing. Sprinkling of water for two days is enough; however water curing is advisable for seven days.

PROPERTIES

MICRO CONCRETE is a high strength precision repair material. It exhibits the following

- Achieves a Compressive Strength of 20 N/mm² in 24 hours.
- Increased bond strength.
- Reduced co-efficient of creep.
- High tensile and flexural strength.

DESCRIPTION

A specially prepared ready to use grey powder which requires addition of water only on site, to produce a free flowing, high strength-concrete which has micro fine aggregates and ability to penetrate into the recesses of concrete members and behind the reinforcement of the member under repair.

The material is based on Portland cements, graded aggregates and fillers, and additives which impart controlled expansion

characteristics in the plastic state, while minimising water demand.

The low water requirement ensures high early strength and long-term durability.

For larger repairs, the mixed MICRO CONCRETE may be modified by the addition of 5mm to

12mm clean, graded, saturated surface dry aggregates at site. For exceptionally large

repairs, the local Rossari office shall be consulted.

PERFORMANCE SPECIFICATION

The fluid micro-concrete repair material shall be a single Component, cement based, microconcrete to which only the Site-addition of clean water (and approved graded coarse Aggregates where specified) shall be permitted. The micro concrete shall contain no metallic aggregates, or chlorides and shall be shrinkage compensated in the plastic state.

Comp, Strength-28 days

BS 1881 Pt 116 > 65N/mm²

Flexural Strength BS EN 1015 Pt 11 > 10N/sqmm²

Tensile Strength BS 6319 Pt 7 1985 > 4N/sqmm²

E modulus 35,500 N/mm²

Water Penetration BS EN 12390 Pt 8 2000 < 5 mm

Rapid chloride permeability AASHTO T 277:93

Low Slant shear bond strength ASTM C882 > 9N/sqmm

ASTM C 1107- 02 Type C Complies.

APPLICATIONS

Structures under repair often require building up with high strength concrete. Conventional concrete poured in the jacketing shutters often exhibits honey combing and poor adhesion apart from its inability to effectively fill the recesses of the broken members and penetrate behind the reinforcements. Mortars used in this area of application have shown a poor MICRO CONCRETE

High Strength free flowing Cementitious Repair Concrete strength and high degree of permeability and they can never match the strength properties of original concrete. MICRO CONCRETE forms an easy tool in the hands of Structural Repair Contractor to get over the major problem of making up the broken/damaged member with a high strength absolute waterproof and freeflowing concrete which tends to flow in all directions to effectively fill and build up the member.

DIRECTIONS FOR USE

MICRO CONCRETE is supplied in powder form.

Mix water to the powder in the ratio of 0.18 approximately to get the desired consistency and pour in the forms. Care should be taken to see that the gaps in the shutter forms are effectively sealed with masking tape or cotton to ensure that the material does not run out of shutters joints. Where the repaired surface needs to be plastered, hack the surface immediately after removal of the shutters.

SURFACE PREPARATION

Surface to be repaired shall be clean and sound free from any deleterious material. Weak portion of concrete should be cut back till sound surface is available. Damp down the surface of old concrete before pouring Microconcrete.

Before pouring Microconcrete bond coat may be applied by brush, sprayed or just sprinkled over the base concrete.

REPAIR OF SOFFITS OF BEAMS

- (1) Remove all loose particles to obtain sound surface. Clean repair / replace / treat reinforcements. Wet the surface.
- (2) Place a shutter to cover the depth of pockets and pour super fluid micro concrete.
- (3) Remove the shutters next day and hack the sides.
- (4) Plaster the surface to its original surface.

REPAIR OF COLUMNS

- (1) Remove all loose particles to get a sound surface. Repair/replace or treat reinforcements. Wet the surface. (2) Effectively shutter the area and make a chute in shutter and pour MICRO CONCRETE.
- (3) Remove the shutter next day and hack if plastering is desired cure for 48 hours.
- (4) Plaster the surface to its original surface.

Technical Support

An experience advisory team is available to

give technical services on request.

YIELD

Approximately 22 -22.5 liters per 50 kg pack.

PACKAGING

MICRO CONCRETE is available in 25 and 50kg moisture resistant sacks.

STORAGE

MICRO CONCRETE should be stored in a cool and dry place away from moisture.

SHELF LIFE

Shelf life of Microconcrete is six months, when stored as per manufacturer's instructions.

SAFETY

MICRO CONCRETE contains cement powders which, during normal use, have no harmful effect on dry skin. However, when MICRO CONCRETE is mixed, or becomes damp, alkali is released which can be harmful to the skin. During use, avoid inhalation of dust and contact with skin and eyes. Suitable gloves, eye protection and dust masks shall be worn. The use of barrier creams is recommended. In case of contact with skin, it shall be washed with clean water. In case of contact with eyes, it shall be rinsed immediately with plenty of clean water and medical advice shall be sought. If swallowed, medical attention shall be sought immediately. Vomiting should not be induced.

FIRE :

MICRO CONCRETE is non-flammable

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