

SUPER REP MC RAPID

High Strength Shrinkage Compensated Fast Setting Micro Concrete

Description

SUPER REP MC Rapid is a one component, shrinkage compensated micro-concrete. On the addition of clean water, the product produces a highly flowability concrete mixture with fast setting property suitable for repairing of concrete structures.

SUPER REP MC Rapid is composed of Portland cement binder, graded aggregates and special additives formulated to achieve a high flowable mix with minimal water content which ensures early strength gain and long durability. It is ideal to poured/cast applications at 50-500mm thickness.

Features & Benefits

- Shrinkage compensated, reduce the risk of cracks.
- Fast Setting
- Cost effective for mass concrete repairing
- Excellent adhesion to all concrete substrates.
- High modulus, ensuring transfer of loads to parent concrete.
- High mechanical properties.
- Flowable and compacted mix
- Low permeability and chloride free

Uses

SUPER REP MC Rapid is designed to reinstate large concrete sections, or to be used where access is difficult or congestion of reinforcement limits the use of traditional materials. The product may be used to provide repairs in a variety of situations, such as:

- Structural repairs to columns
- Replacing sections of concrete beams
- Making good areas of honeycombed concrete
- Provide hard wearing repairs to concrete flooring.
- Repair and reprofiling of piles
- Can be applied in structural membrane where steel reinforcement is congested or access to this area is difficult during casting the concrete.

- Tunnels, pipes and other below ground construction.

Technical Properties

Consistency	Flowable Concrete
Wet Density	2,250 Kg/m ³ approx.
Setting time	Initial 1.5 hr Final 2.5 hr
Coefficient of thermal expansion	1X10 ⁻⁶ μm
Compressive strength	50 N/mm ² @ 7 days 65 N/mm ² @ 28 days
Flexural Strength	8.5 N/mm ² @ 28 days
Tensile Strength	≥4.5 N/mm ² @ 28 days
Slant Share Strength	>8.5 N/mm ² @ 28 days
Rapid Chloride permeability	<1000
Water penetration	<10mm @ 5bar pressure
Water Absorption	≤2%
Drying Shrinkage @28 days	<500 macrostrain
E-modulus	>25,000 N/mm ²

All values are subject to 5-10% tolerance

Standards Compliance:

- EN 1504 Class R4, BS EN 12391 Pt.8
- BS 6319, 6431& 1881
- ASTM C109, C190, C1583, C580, C882
- ASTM C157, C1202

Application Procedures

Surface preparation:

It is essential that adequate preparation is carried out prior to the application of **SUPER REP MC Rapid**.

This preparation should ensure the removal of all grease, oil and loose material.

The area to be reinstated using **SUPER REP MC Rapid** should be generally at least 50 mm as a minimum depth with a maximum of 500 mm, although greater depths may be applied depending on the design of the structure being repaired.

To avoid "feather edging", it is advisable to neatly delineate the repair boundary by saw cutting to a depth of 50mm.

All corroded steel should be completely exposed including the rear of the bar to enable thorough cleaning. It is recommended that grit blasting be used to clean the reinforcing steel and attention should be paid to the rear of the bar to ensure all corrosion products have been removed.

Once the reinforcing steel has been cleaned it should be coated immediately with one coat of EPOPRIME ZINC (zinc rich primer) or SUPERFER protective coatings. Before applying **SUPER REP MC Rapid** soak the substrate with water, allow excess water evaporate or use sponge

Mixing Instructions:

To prepare the mortar, pour 3.25-3.5 liters of clean water into container and add slowly the content of **SUPER REP MC Rapid** (25 Kg.). Mix using spiral paddle in slow speed heavy duty drill for 3-5 minutes till a homogeneous lump free consistency mix is achieved. Always add powder to water and not the other way around.

Application Instructions:

To obtain the full benefit of the fluidity provided, apply the mixture immediately after mixing.

SUPER REP MC Rapid can be installed by shutter and casting techniques. Use trowel for finishing touch.

After application, avoid rapid evaporation for the water of mix, cover exposed surface with clean wet hessian or apply one or two coats of one of SBI ULTRACURE products.

Yield

A 25kg bag of **SUPER REP MC Rapid** will yield approximately 12.8 Liters of mortar.

Packaging

SUPER REP MC Rapid is available in 25kg bag.

Storage

Keep the product in dry and sheltered place at temperature between +5°C to +35°C. In these conditions and in closed original containers, the product will have a shelf life of at least 12 months.

Health and Safety

Wear gloves, goggles to avoid any contact with eyes and skin. In case of splashes in the eyes wash abundantly with warm water and consult a doctor.

For further information or particular use, contact SBI Technical Department.

Quality & Care

All products produced in SBI facilities are manufactured under a management system certified to conform to the requirements of the quality and environmental health & safety standards ISO 9001 & ISO 14001.

SBI products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Service. All SBI datasheets are updated on a regular basis. It is the user's responsibility to obtain the recent version.

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