

Rocky Repair MC

Description

ROCKY REPAIR MC is a single component, cement based flowable non-shrink micro-concrete. It is composed of Portland cement, graded aggregates and special additives. It is formulated to achieve a high flowability mix with minimal water content which ensures early strength gain and long durability..

Use

- Replacing sections of concrete beams
- Structural repairs for columns
- Repair and fill deep honeycombed concrete
- Provide hard wearing repairs to concrete flooring

Advantages

- Low alkaline and chloride free product
- Economical product for mass concrete repairs
- Excellent adhesion to concrete substrates
- Compatible to all cementitious products
- Non-shrink, with early strength characteristics
- Can be poured manually or by pump
- One component product which makes it easy to mix and apply at site

Technical Properties

Appearance	Grey powder
Wet density at 25°C	2.3 kg/L
VOC	2.0 g/L
Granulometry	10mm
Compressive strength at 7 days / at 28 days (ASTM C579)	46 N / mm ² / 65 N / mm ²
Flexural strength at 28 days (ASTM C580)	7.5 N / mm ²
Tensile strength at 28 days (BS 6319 – 7)	4.0 N / mm ²
Slant Shear Strength (ASTM C 882)	7.6 N /mm ²
Drying Shrinkage at 28 days (ASTM C157-93)	< 500 microstrain
Coefficient of thermal expansion (BS 6431-15)	1 x 10 ⁻⁶ µm
Chloride Ion Penetration (ASTM C1202)	Low
Water Absorption (BS 1881 Pt 122)	< 1.9%
Water Penetration (BS EN 12391 Pt 8)	NIL
Setting time Initial / Final	2.5 hours / 4.5 hours
Workability at 25°C	> 30 minutes

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Mixing

To prepare the mortar, it is recommended to have a forced mixer of spiral paddle in a slow speed (300/400 rpm) heavy duty drill. It is essential that machine mixing capacity and labor availability is adequate to enable the placing operation to be carried out continuously. Add 3.3 – 3.5 liters of water in the mixing drum then add the full bag of ROCKY REPAIR MC and mix for at least 4 – 5 minutes till obtaining a fluid, uniform lump free consistency mix.

Do not part mix the bags, nor use additional water than specified. Note that powder must always be added to water. To obtain the full benefit of the fluidity provided, apply immediately after mixing.

Application

Cast the mortar into the formwork, allowing air to escape. It's advisable to spray the formwork by water prior to placing the mortar to avoid water absorption from the mix. Use trowel or sponge for the finishing touch.

Curing

The repaired area shall be cured in accordance with good concrete curing practice and protected from drying winds, sun or excessive heat. Curing shall be done with non-degradable curing compound ROCKY CCAC. Alternatively; a wet hessian cloth covered with polyethylene sheet can also be employed. Curing should begin as soon as final finish is achieved.

Cleaning

ROCKY REPAIR MC should be removed from tools and equipment and mixers with clean water immediately after use. Cured material should be removed mechanically.

Recommendations

- Do not apply the product at temperature less than +5°C
- Do not add water once the mix has begun to set
- ROCKY REPAIR MC should not be exposed to running water either during application or prior to final set
- Do not mix the bags partially
- In warm weather, store the material in cool place. Make sure to use cool water to keep the mixed mortar temperature below +30 °C

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Surface Preparation

Concrete preparation

The surface of the concrete to be repaired should be sound, clean and uncontaminated. The boundary of the repair area should be cut using a concrete saw to provide a neat edge to the repair with no feather edging and to provide a square edge Repairs using ROCKY REPAIR MC should be generally at least 50 mm as a minimum depth with a maximum of 500 mm in single coat. Oil and grease deposits should be removed by stiff brushing, detergent scrubbing with a heavy-duty cleaner/degreaser or steam cleaning. Prepare the formwork to be rigid and tight to prevent loss of material. The formwork should include drainage outlets for presoaking.

Steel preparation

Any corroded steel in the repair area must be fully exposed. All exposed reinforcement shall be cleaned of corrosion products by wet grit blasting or other approved means to achieve a clean and bright finish.

In case that reinforcing bars, section is reduced due to oxidization, integrate them with additional bar reinforcement.

Coverage

- ROCKY REPAIR MC is packed in 25 Kg bags.
- Yield: 12.5 liters / 25 kg bag with 3.5 liters water addition.

Shelf Life & Storage

The product must be kept in dry and sheltered place, in these conditions its shelf life will be 12 months.

Health & Safety

ROCKY REPAIR MC can be harmful to skin as it contains cement powders which may releases alkalis when mixed with water. During application, wear appropriate protective clothing, goggles, gloves and respiratory equipment if necessary.

In case of contact with skin, rinse with water and again wash thoroughly with soap and water. In case of contact with eyes, rinse with plenty of water and seek medical advice accordingly.

If ingested, obtain medical attention immediately.

Important Note

The information in this Technical Data Sheet is based on Rocky-SCM Canada's experience. Rocky-SCM does not accept any liability arising from the use of its products as it has no direct or continuous control over where or how its products are applied. All Rocky-SCM Data Sheets are updates on regular basis. It is the user's responsibility to obtain the latest version.