

# Rocky Repair HCS

## Description

ROCKY REPAIR HCS is a one component cement-based mortar, designed as a high compressive strength repairing mortar. It is composed of high resistance hydraulic binders, silica, graded aggregates and special additives, which gives a high strength, no shrink mortar, fit to the applied vertically in a large thickness.

## Use

General concrete repair  
Repairs to structural concrete elements, e.g. Reinforced beams and columns  
Highly trafficked surfaces, particularly transition strips adjacent to mechanical bridge joints.  
Repairs in marine environments or other situations, where concrete is in contact with chloride or Sulphate solutions

## Advantages

- Easy to mix and apply
- Excellent bond strength to concrete substrate.
- Good abrasion resistant
- Shrinkage-compensated
- High compressive strength
- Low permeability providing protection against the ingress of Chlorides and Carbon Dioxide

## Technical Properties

Appearance	Grey powder
Wet Density at 25°C	2.15 kg/L
VOC	0.1 g/L
Thickness per coat	10 – 60 mm vertical / 10 – 35 mm overhead / 10 – 100 small pockets & horizontal
Compressive strength After 7 days / After 28 days (ASTM C579)	55 N / mm <sup>2</sup> / 75 N / mm <sup>2</sup>
Flexural strength After 28 days (ASTM C580)	Up to 11 N / mm <sup>2</sup>
Tensile strength After 28 days (BS 6319 Part 7)	>3 N / mm <sup>2</sup>
Water absorption (BS 1881)	4%
Drying Shrinkage At 7 days / At 28 days (ASTM C157-93)	< 300 microstrain / < 500 microstrain
Rapid Chloride Permeability (ASTM C1202)	Low
Workability at 25°C	> 30 minutes
Application Temperature	from +5°C to +35°C
Granulometry	0-3.5mm

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## Mixing

For mixing process, a slow speed drill (200-300rpm) fitted with a suitable paddle is recommended. Place 4.0-4.5 liters of cold clean water in the mixing bucket. With the drill in operation, add the entire content of the 25 kg bag of ROCKY REPAIR FIBER while mixing continuously till a uniform lump free consistency mix is achieved. Powder must always be added to water. Allow the obtained mix to stand for about 3 minutes and then remix before application. Under no circumstances should partial mixing be considered.

## Application

Apply the product manually with a trowel or spatula to ensure thorough compaction around the reinforcement and against the edges of the reinstatement area. The repair then can be finished with a steel trowel. The product can be applied up to 60 mm in thickness in vertical, and in 100 mm layers in small pockets or horizontal plane. The material should not be applied at less than 10 mm thick layer. Use a steel trowel 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 HCS 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 HCS 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 decayed or damaged area to be repaired should be marked with a marker. Cut the marked area to a depth of at least 10mm using a handheld concrete saw or disc grinder to avoid feather edging and to provide a square edge. Break out or chip the complete repair area down to sound base using sharp tools or chipping hammer.

Oil and grease deposits should be removed by stiff brushing, detergent scrubbing duty cleaner/degreaser, steam cleaning.

### 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 HCS is packed in 25 kg bags.
- Yield: 12.9 liters / 25 kg bag with 2.8 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 HCS 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.