

# STRUCTURAL REPAIR - H

Horizontal structural concrete repair mortar & concrete floor topping

**DESCRIPTION:**

STRUCTURAL REPAIR - H is a high performance concrete repair mortar & topping for concrete repairs in 7mm to 100mm deep horizontal applications. It is used for remedial work & toppings on concrete where high performance & durability are required.

unique in its ability to travel through concrete & completely coat the steel. This protection can be ordered as a product upgrade.

**PACKAGING:**

20kg bags.

**TYPICAL APPLICATIONS:**

- Horizontal repairs to concrete structures & pavements
- Toppings on sound concrete slabs
- Factory & commercial slab repairs
- Bridge deck repairs
- Marine structure deck repairs
- Water retaining structure slab repairs

**YIELD:**

Approximately 10.3L or 0.0103m<sup>3</sup> per 20kg bag.

**STORAGE & SHELF LIFE**

Can be stored in its original packaging in a dry place well sealed for a period of 6 months after production. Do not store opened bags.

**ADVANTAGES:**

- One component
- Versatile 7mm to 100mm application depths
- Horizontal repairs & toppings
- Fibre reinforced
- Shrinkage compensated
- Steel corrosion inhibitor upgrade option
- Short curing times
- High bond strength
- Durable
- Low chloride ion permeability
- Improved sulphate resistance
- Improved abrasion resistance

**PRECAUTION**

Do not apply product onto surfaces less than 5°C & more than 30° C. Do not use product in temperatures less than 5°C & more than 30° C.

**SUBSTRATE PREPERATION:****Repairs:**

Concrete substrates should be at least 3 months old. They should be clean & free from all contaminants, loose particles, coatings, dirt, mould, soft efflorescence etc. Substrates must be sound & rough to ensure a good bond. For a durable repair, feather edging should be avoided by cutting a perimeter edge at least 20mm in depth. Remove all oxidation from exposed rebar & ensure that there is at least 15mm (or 'finger room') behind each rebar. For large volume voids above 50mm in depth, use steel mesh placed on bar chairs.

**Toppings:**

Concrete substrates should be at least 3 months old. They should be clean & free from all contaminants, loose particles, coatings, dirt, mould, soft efflorescence etc. Substrates must be sound & rough to ensure a good bond. Repair all cracks in concrete, using Cemix 10 MINUTE CONCRETE CRACK MENDER. For toppings above 50mm in depth, use steel mesh placed on bar chairs.

**TECHNICAL DATA:**

COMPRESSIVE STRENGTH: 50MPa at 28 days

BOND STRENGTH: > 3MPa

THERMAL COEFF. OF EXP:  $9.0 \times 10^{-6}$  mm/mm/ °C

CHLORIDE ION PERMEABILITY: < 1000 coulombs

WORKING TIME: 40 minutes at 20°C

APPLICATION TEMP: 5°C to 30°C

APPEARANCE: Sand/cement grey powder

*The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations may occur on site.*

**STEEL CORROSION INHIBITOR:**

MCI 2020, a migratory steel corrosion inhibitor admixture, can be added to STRUCTURAL REPAIR – H. This will migrate to nearby structural steel by ionic action & form a protective layer around the steel. This layer is highly effective in protecting the structural steel in both anodic & cathodic areas. MCI 2020 is

**CONTROL JOINTS:****Repairs:**

Honour any control joints in the concrete substrate – do not apply product over control joints.

**Toppings:**

Mimic control joints in concrete substrate up into topping. Install control joints in topping. Recommended control joint spacing is 4m x 4m. Max spacing 5m x 5m. Control joints are

required at topping penetrations & distinct depth changes in the topping.

**MIXING:**

Mix whole bags of product. Add 50% of water to mixer & then add product to water. Add rest of water slowly until the desired consistency is achieved. Maximum total water is approximately 2.7L per 20kg bag. Mix thoroughly for 4 to 5 minutes using a mechanical mortar mixer. In hot weather consider using chilled mixing water. In very cold weather consider using warm mixing water. Do not mix more product than can be mixed, placed & finished in 40 minutes.

**APPLICATION:**

**Repairs:**

Dampen the concrete substrate & then thoroughly prime it with Cemix MULTIBOND brushed neat into the surface just prior to mortar application. Firmly push the STRUCTURAL REPAIR - H into the surface to obtain a wet bond, while the MULTIBOND is still wet. Application is from one side of the repair to the other completely filling void. Firmly compact mortar in to void. For a durable repair apply product to a minimum depth of 20mm & avoid featheredging. Fill void to a maximum depth of 100mm. Apply product in layers for thicker repairs. Roughen the preceding layer prior to it hardening & prime the preceding layer after it has hardened. Trowel finish as required.

**Toppings:**

Dampen the concrete substrate & then prime it with Cemix MULTIBOND brushed undiluted into the surface just prior to mortar application. Firmly push the STRUCTURAL REPAIR - H into the surface to compact it & obtain a wet bond, while the MULTIBOND is still wet. Application is from one side of the floor to the other. For a durable repair apply product to a minimum depth of 20mm & avoid featheredging. Place topping to a maximum depth of 100mm. Apply product in layers for thicker repairs. Roughen the preceding layer prior to it hardening & prime the preceding layer after it has hardened. Screed & trowel finish as required.

**CURING:**

It is very important to prevent early plastic state moisture loss prior to the product setting. Cure product thoroughly after it has set for 7 days.

**CLEANING:**

Clean all tools with water & brush immediately after use.

**SAFETY:**

Avoid contact with eyes & skin, both from wet & dry mix. Do not breathe in dust. Wear suitable protective clothing, gloves, eye protection & barrier cream. Wear a suitable dust mask. Wash thoroughly after handling & store any leftover material properly.

**FIRST AID:**

Irrigate eyes & skin with plenty of water & seek medical advice immediately.

**SPILLS & LEAKS**

Keep out of sewers & storm water drains & dispose of any leftover material as trade waste in accordance with local authority guidelines.

**DISCLAIMER:**

*Recommendations & advice regarding the use of this product are to be taken as a guide only. Other than as appears on this products packaging, CEMIX LTD does not give any warranty express or implied as to the suitability of this product for your particular use, because the usage of this product is beyond the control of CEMIX LTD. If you need advice concerning the use of suitability of this product for your particular application, please contact CEMIX LTD first. If this product is defective because of CEMIX LTD's fault, please contact CEMIX LTD. who will replace it at no cost.*