

## Corrocrete HB

Hand applied, fibre-reinforced repair mortar

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### Product Features

**Corrocrete HB** is a single component, pre-mixed and bagged blend of cement, selected aggregates, special polymers & reinforcing fibres, requiring only the addition of clean water to produce a shrinkage compensated, hand applied, high build mortar consistency, capable of application thicknesses of 5 – 50 mm in a single layer for repairing structural concrete or masonry.

**Corrocrete HB** is non metallic, free from chlorides, can be painted on directly and has low permeability, providing an excellent finish that resists penetration from chloride & carbon dioxide attack.

### Typical Uses

**Corrocrete HB** is typically used as a reinstatement mortar to structural concrete walls, columns, soffits and other repair areas where a hand applied, high build material is advantageous. It is particularly suitable for vertical & overhead repairs without the need for shuttering, to repair damaged or honeycombed concrete. **Corromortar HB** is compatible with Corrotech Construction Chemicals range of acrylic, epoxy, polyurethane or polyurea coatings.

Technical Data		
Properties	Test Standards	Typical Values
Appearance		: grey powder
Particle size		: 0.1 - 2 mm
Bulk density		: 1.36 gms / cc
Water ratio		: 15 - 17% (3.5 - 4 litres of water per 25 kg bag)
Setting time		
Temperature		+5°C    +20°C    +30°C
Initial setting		7 h    2 h 40    1 h
Final setting		8 h 30    3 h    1 h 30
Pull off strength @ 28 days	BS 1881 Part 207 : 1992	: > 1 N/mm <sup>2</sup>
Compressive strength, @ 28 days	BS EN 196 - 1 : 2005	: > 60 N/mm <sup>2</sup>
Flexural strength, @ 28 days	BS EN 196 - 1 : 2005	: > 9 N/mm <sup>2</sup>

Note: All values given are subject to 5 - 10% tolerance.

### Directions for Use

#### Preparation

##### Concrete

Long term durability and function can only be achieved with good preparation to give a strong mechanical bond to the substrate and complete void filling.

Mark the extremity of the repair area and saw cut to a minimum depth of 10 mm to define the area.

Chip out the area within the saw cut back to sound concrete, to

a minimum depth of 5mm ensuring no feather edges and a good mechanical key for the subsequent repair.

If steel reinforcement is exposed, continue to break out the concrete to at least 15 mm behind the bars.

Mechanically prepare concrete surfaces preferably by grit blasting or mechanical methods, to provide a mechanical key for the **Corrocrete HB**.

Thoroughly soak concrete substrates with clean water for at least 1-2 hours, removing standing and excess water prior to priming with **Corrobond SBR**.

#### Priming

##### Concrete

Apply a bonding coat comprising 3 parts water and 1 part **Corrobond SBR** (see separate data sheet) to the pre-soaked concrete surface. Apply the repair mortar 'wet on wet' to the bonding coat. DO NOT LET THE BONDING COAT DRY.

Work the primer well into the concrete surface using a stiff brush to give an even, continuous, unbroken coating.

A second priming coat may be required if the substrate is particularly porous.

Simply re-prime if the primer coat has dried.

#### Mixing

It is essential that the mixing instructions are carefully followed to ensure the correct characteristics of the product are achieved. Failure to do so can result in lower performance or even possible failure of the product.

Accurately measure 3.5 - 4 litres of drinking quality water and place in a suitable empty container with sufficient volume to accommodate the mixed material.

Slowly add the powder to the water and mix continuously for 4 - 5 minutes using a slow speed drill and paddle or forced action mixer, until a homogenous consistency is achieved.

No additional water should be used as this will change the performance of the mixed material.

#### Application

Apply the mixed **Corrocrete HB** onto the prepared surface using a steel trowel, plastic or wood float. Spread out and tamp or compact to completely fill the repair area to a minimum thickness of 5 mm.

Finish with a plastic float, wood float or steel trowel depending on the surface texture required.

Subsequent layers can be applied to the first layer after approximately 12 hours. The first layer should be scratch keyed to assist with bonding.

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Expansion joints must be reflected through the **Corrocrete HB** and preferably sealed with a sealant from the **Corroseal** range. No further pre-soaking or priming is required between layers.

#### Curing

Curing is essential for all cementitious products to prevent possible shrinkage cracks and ensure the performance characteristics of the product are achieved.

We recommend applying one of the **Corrocure** range immediately after initial hardening of the product or removal of any formwork.

The duration for curing will depend on the applied thickness and ambient conditions. For thickness of 10 – 25 mm, we recommend curing for at least 4 – 7 days using one of the **Corrocure** range, applied immediately after initial hardening of the product or removal of any formwork.

Do not use curing compounds if subsequent layers of **Corrocrete HB** are to be applied.

Please consult with Corrotech regarding compatibility of the **Corrocure** range with the finishes to be used.

#### Hot Weather Conditions

For application above 40°C we recommend adopting the following guidelines:

Store unmixed materials in a cool preferably air conditioned environment.

Avoid exposure of mixed & unmixed materials to direct sunlight.

Use iced water for mixing.

Keep equipment that will be in contact with the product cool and away from direct sunlight.

Avoid application during the hottest time of day.

#### Cleaning

Clean tools & equipment immediately after use with detergent and water.

#### Limitations

Substrate temperatures should be above 5°C and rising. For application in temperatures above 40°C please refer to hot weather condition recommendations.

Avoid application if the area may be subject to the onset of rain or moving water.

Do not part mix under any circumstances.

Additional coating protection should be applied if the product is exposed to chemicals.

All products should be used within the pot life. Materials not used within the specified time should be discarded.

If the above general application details do not meet with your requirements, please contact Corrotech for a project specific method statement.

#### Estimating

**Corrocrete HB** pack size: 25 kg. Coverage rate approximately 13 - 14 litres yield per bag, or 2 kg per m<sup>2</sup> per mm thickness

**Corrobond SBR** pack size: 5, 20 & 200 litres. Coverage rate depends on concrete porosity. Approximately 3 - 8 m<sup>2</sup> per litre of diluted solution

**Corrocure AR** pack size: 20 & 200 litres. Coverage rate approximately 4 - 5 m<sup>2</sup> per litre, per coat

All coverage rates given are theoretical and subject to actual site conditions. We recommend trial areas are done to establish practical consumption particularly for primers.

#### Health & safety

Always use appropriate PPE including gloves, goggles and a barrier cream to avoid contact with skin and eyes.

Should contact with skin or eyes occur, wash immediately with plenty of clean water and seek medical advice.

If swallowed, seek medical attention immediately. Do not induce vomiting.

Avoid inhalation and ensure adequate ventilation or suitable respiratory equipment if working in confined spaces.

Do not expose products to fire or naked flames under any circumstances.

Always refer to the product Material Safety Data Sheet (MSDS) for full health & safety and handling recommendations.

#### Storage

**Corrocrete HB** has a maximum shelf life of 12 months from the date of manufacture.

To maximize shelf life always store products in their original, unopened packaging in a dry environment, away from direct sunlight with a minimum temperature of 10°C but not exceeding 35°C.