



HIGH BUILD REPAIR MORTAR

Cementitious repair mortar for vertical or overhead repairs

DESCRIPTION

Penapatch High Build HB is a high strength; high build shrinkage compensated polymer modified repair mortar. Penapatch High Build HB is designed to be used for vertical and overhead applications. Penapatch High Build HB has high, ultimate compressive strength and high abrasion resistance. The specially selected cements and polymers contained in Penapatch High Build HB provide a mortar with strong adhesion to concrete and masonry on vertical and overhead substrates with negligible shrinkage. Penapatch High Build HB requires the addition of water ONLY.

FEATURES AND BENEFITS

- High build repairs achievable in a single application
- Low permeability providing protection from chloride attack & carbonation
- Medium strength and medium abrasion resistance
- Dimensionally stable • Excellent workability
- Shrinkage compensated allowing for long term dimensional stability
- Eliminates the need for formwork • Shrinkage compensated
- Can be applied by dry or wet process, achieving high build with exceptional compaction and enhanced performance
 - May be coated with Aftek range of protective coatings
- Exceptional bond strength to concrete substrates
- Internal or external applications
- Pre-bagged eliminates any on-site mixing variation
- Easy to use- simply add water and mix

APPLICATION INSTRUCTIONS

Surface and Substrate Preparation

All surfaces must be free of oil, grease, dust, plaster, paint and any other contamination that will inhibit the bond. Any cracked or weakened surface should be removed and repaired to provide a solid foundation. It is recommended that for large areas a minimum depth of 10mm be prepared as to avoid excessive feather edging or skim coating. Break out the repair area to a minimum of 10mm up to the saw cut edge. Scabbing or high pressure water blasting should be used to remove laitance and provide a mechanical key. If any corroded steel is present remove all loose scale and corrosion/rust deposits. Grit blasting is effective in removing corrosion, and all steel including re-bars should be cleaned to a bright condition. Immediately after cleaning steel, the steel should be treated with Aftek Zinc Rich Primer. This will stop further oxidation and corrosion.

SETTING TIMES 20°C	
Initial	2-3 Hours
Final	4-5 Hours

YIELDS	
Consistency	Mortar
Litres of water per 20kg bag	3.0 - 3.2
Yield per bag litres approx	13.5
Fresh wet density kg/m ³ approx	1570
Bags required per cubic metre (m ³) approx	74

Priming

Concrete/Masonry: PRIMING IS NECESSARY.

The substrate should be pre-soaked with water and excess water removed prior to application of Rendergrip B. For damp or repairs exposed to occasional or permanent dampness or water immersion, the substrate must be primed with Epilox Binder. For very porous substrates all masonry surfaces should be primed with Aftek Rendergrip B. Allow the primer to reach a tacky consistency before applying Penapatch High Build HB .



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Steel/Rebar:

Exposed steel and rebar should be primed with Aftek Zinc Rich Primer. Remove all loose corrosion deposits on steel. Steel should be cleaned to a bright condition. On completion of cleaning, prime steel with Aftek Zinc Rich immediately.

Note: If the Rendergrip B primer dries prior to application of Penapatch High Build HB, it is imperative that the Rendergrip B is re-applied and allowed to reach a tacky consistency prior to the application of Penapatch High Build HB. If the Rendergrip B is too wet, the ultimate build-up of the Penapatch High Build HB will be difficult as slump will occur to the interface of the concrete substrate and repair mortar. In the case where Epilox Binder is used as a primer, the Epilox must be tacky NOT DRY prior to the application of the Penapatch High Build HB.

MIXING

Penapatch High Build HB is ready to use- simply add the powder to 3.0 – 3.2 litres of water and mix using a mechanical forced action mixer with a high shear spiral mixing paddle.

DO NOT USE FREE FALL MIXERS.

Always add the powder to the pre-measured water and mix until a homogenous mix is obtained which is lump free.

MIXING NORMALLY TAKES 3-5 MINUTES.

Any shorter mixing time will result in an inconsistent mix.

DO NOT MIX PART BAGS

DO NOT MIX BY HAND

DO NOT ADD EXCESS WATER.

DO NOT ADD MORE THAN 3.2 LITRES OF WATER

Excess water will reduce the ultimate (final) strength and extend the drying time of the product.

Additional or excess water will increase the sag and reduce the build-up of the mortar.

Only mix the quantity of material that can be used within the set time of the material. Discard partially set or hardened material.

APPLICATION

Apply the mixed material to the prepared surface using a trowel or a gloved hand. Thoroughly compact the mortar into the prepared and primed substrate and around the exposed steel reinforcement and re-bars.

A smooth surface can be obtained using a steel trowel.

DO NOT OVERWORK THE SURFACE

Spray Application

Penapatch High Build HB can be applied using wet application technique. The mortar is pre-mixed with the required dosage of water and then pumped through a delivery hose through a spray gun with a suitable nozzle. Consult Aftek for further information.

LOW TEMPERATURE APPLICATION:

Do not apply at temperatures below 5°C and falling. All temperatures of 5°C and below, the use of warm water is recommended.

HIGH TEMPERATURE APPLICATION:

Do not apply at temperatures above 35°C as initial set will commence early and the product will be difficult to apply. It is recommended that chilled/cold water be used to mix the product.

CURING

Curing should be conducted in accordance to good concrete practise and Aftek recommend the use of suitable curing compound, Curecon A, applied in accordance to Technical Data Sheet.

OVER COATING WITH PROTECTIVE COATINGS

Penapatch High Build HB can be over coated with the Aftek range of decorative and protective coatings. All coatings may be applied over the Curecon A; hence removal of the curing compound is not necessary.



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PRECAUTIONS

- Addition of excess water, other than specified will lead to extended cure times and low strength development
- If the substrate into which the Penapatch High Build HB is applied moves or cracks, reflective cracking will occur in the Penapatch High Build HB
- Ensure existing concrete surfaces/ substrates are at least 21 days old prior to application of Penapatch High Build HB
- Do not apply Penapatch High Build HB in areas less than 5mm thick, occasional thickness less than 10mm is acceptable only in very localized areas
- In application where high winds and exposed areas are present, ensure curing compound is applied after final trowel
- Protect from direct sunlight/ heat
- Ensure Penapatch High Build HB does not come into contact with water or rain for a minimum of 24 hours
- Penapatch High Build HB should not be used when temperatures are below 5°C and greater than 35°C
- If Penapatch High Build HB is to be used in immersed conditions- Epilox Binder must be used as a primer.
- For more detailed information, please read the SDS for this product.

STORAGE

Penapatch High Build HB has shelf life of 9 months if stored in the original sealed packaging in dry, low humid environments.

CLEAN UP

Wash all tools and equipment with fresh, clean water immediately after use. Penapatch High Build HB can only be removed mechanically.

FIRST AID MEASURES

EYES: Immediately hold eyelids apart and flush the eye continuously with running water. Continue flushing for at least 15 minutes. Remove contact lenses continue flushing.
SKIN: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available).
INHALATION: If fumes or combustion products are inhaled remove from contaminated area.
INGESTION: If swallowed do NOT induce vomiting. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice.



The information and any recommendations relating to the application and end-use of all Aftek products are provided in good faith based on Aftek's knowledge and experience of the products. In applications, the differences in materials, and variances of substrates and actual site conditions can vary such that no warranty in respect of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be taken as inferred either from this information, or from any written recommendations, or from any other advice offered by Aftek. The proprietary rights of third parties must be observed. All orders are accepted subject to our sale terms and conditions. All users should always refer to the most recent and up to date issue of the Technical Data Sheet for the product concerned, which is available on request. It is recommended that products should always be properly stored, handled and applied under tested and recommended conditions.

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