



Tecpatch HB80

Structural repair mortar for non-slump, high build repairs of concrete

USES

Tecpatch HB80 is a fine filled, structural cementitious repair mortar for the repair of concrete where a high build is required. Repairs of up to 80mm can be achieved without slump or shrinkage, and when used with Renderprime HB, excellent adhesion to nearly all concrete substrates can be achieved. Tecpatch HB80 is ideal for high strength structural repairs and repairs to precast concrete panels. Tecpatch HB80 may be used in conjunction with Patchguard anodes to protect steel reinforcing.

BENEFITS

- High strength and abrasion resistance
- Excellent adhesion to concrete substrate when used with Renderprime HB
- High build – up to 80mm repairs without slump
- Low permeability and high resistance to chlorides and carbon dioxide
- Easy mixing and application
- Durable finish

TECHNICAL SUPPORT

Aitken Freeman offers a comprehensive range of high quality, high performance construction products. In addition, Aitken Freeman offers technical support to users and specifiers, and can arrange on-site visits to end users and contractors.

APPLICATION

Preparation

All surfaces to be repaired with Tecpatch HB80 should be clean of oil, grease or any other contaminant which may inhibit the bond. Cracked or weakened concrete should be removed prior to application so as to provide a good foundation for any repair. Scabbling or water blasting can also be used to remove any laitance and provide a mechanical key.

DESCRIPTION

Tecpatch HB80 is supplied as a ready to use, factory prepared, dry powder. Tecpatch HB80 is a blend of Portland cements, polymers and chemical additives which reduce water demand and produce an easily trowelled, high build concrete repair mortar.

TYPICAL PROPERTIES

**Compressive Strength @20deg 50%RH
As per AS: 1478:2-2005**

24 Hours	22MPa
7 Days	68MPa
28 Days	80MPa
Setting Times	
Initial Set	175 minutes
Final Set	285 minutes
Drying Shrinkage	
7 Days	<100 microstrain
28 Days	<350 microstrain
56 Days	<450 microstrain
Fresh Wet Density	
2.6 litres Water per bag	1900kg. m3
Flexural Strength	
1 Day	5.5 MPa
7 Days	7.5 MPa
28 Days	9.5 MPa
Abrasion Resistance	
Age	Wear
28 Days	120
	Standard 40-50MPa Concrete has wear of 71
Youngs Modulus	
	Approx. 26GPa
Co-efficient of thermal expansion	
	$7-11 \times 10^{-6}/^{\circ}\text{C}$
Maximum Water/Powder Ratio	
	0.29
Alkaline Solutions	
	Resistant
Bond Strength	
	3.2MPa
Tensile Strength	
	4.5MPa

Priming

Prime the concrete substrate with Renderprime HB just prior to commencing the repairs. Best results are achieved when the primer is tacky to touch. Where the substrate is very porous, predampening with water is advised, however free water on the surface will reduce the bond and inhibit ultimate strength of the product.

In water retaining structures and permanent immersion of the repairs the surface should be primed with Granogrip, a two-part epoxy bonding agent. The mortar is applied to the epoxy primer while it is still wet or tacky.

Dry primer must be sanded and reapplied. Where reinforcement or other steel is exposed, coat with Zincote before application of Tecpatch HB80.

Mixing

Add the required mixing water (2.6 – 2.9 litres per bag) to the mixing vessel and slowly introduce the Tecpatch HB80 powder. Mix for 3 – 4 minutes using a forced action mixer suitable for mortars, until a smooth consistent mortar is achieved. Avoid addition of excessive water which will reduce the final strength and make the application more difficult. Only mix as much Tecpatch HB80 as can be used within the setting time.

ESTIMATING & SUPPLY

Tecpatch HB80 is supplied in 20kg moisture resistant bags. Coverage is around 1.05m² @ 10mm average thickness per bag.

Renderprime HB is supplied in 1, 5 or 20 litre poly drums. Coverage of Renderprime HB is 5 -7 m² per litre.

A scabbled or uneven surface will result in reduced coverage for primer and repair mortar.

PRECAUTIONS

Tecpatch HB80 contains cement powders which, when mixed or become damp, release alkalies which can be harmful to the skin. During use, avoid inhalation of dust and contact with skin and eyes. Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment. The use of barrier creams provides additional skin protection. In case of contact with the skin, rinse with plenty of clean water, then cleanse with soap and water.

Installation

Apply the mixed mortar to the substrate using a trowel or gloved hand. Ensure product is properly compacted around reinforcement bars. Maximum thickness of any application should be limited to 80mm, and feather edging should be avoided when making repairs. A minimum thickness of 5mm should be maintained for all repairs; this can be achieved by saw cutting the edge of areas to be repaired. Where repair depth is greater than 80mm, a second layer can be applied after 24 hours. Our technical or sales staff can advise on the best method of achieving large scale repairs.

CURING

On completion of the trowelling operation, exposed areas can be cured with a thin layer of Renderprime HB to prevent the loss of surface moisture when the repair is subject to direct sunlight or strong winds. Where drying conditions are extreme, cure the exposed mortar with Pavecure A.

LIMITATIONS

For low temperature working, when the air is 5°C on a falling thermometer, normal precautions for winter working with cementitious materials should be adopted.

At ambient temperatures above 35°C, ensure sufficient labour for applying and trowelling are available to finish the surface to the required standard before the final set has commenced. Good curing is essential under hot and/or windy conditions.

CLEAN UP

Tecpatch HB80 should be removed from tools and equipment immediately after completion using water. Cured material can only be removed mechanically.

STORAGE

Tecpatch HB80 has a shelf life of 12 months if kept in dry store in unopened, sealed bags. If stored in high temperature and/or high humidity locations, the shelf life may be significantly reduced.

ALLIED PRODUCTS

In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately - do not induce vomiting.

Material Safety Data Sheets (MSDS) are available to users of Aitken Freeman products on request. Please ensure you have read this data sheet, the MSDS, and the product label carefully before first use of any product.

Aitken Freeman manufactures a broad range of construction products and can supply the following:

- Grouts and anchoring systems
- Epoxy Surface Coatings
- Admixtures for concrete
- Adhesives & Sealants
- Floor toppings
- Floor levelling compounds
- Concrete Repair materials
- Waterproofing solutions

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Refer to Material Safety Data Sheet for precautions and personal protection

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