

CAP PATCH-HS

High Strength, Horizontal/Vertical Structural Patching Mortar

DESCRIPTION

CAP PATCH-HS is a pre-mixed cement based, high strength mortar system consisting of polymers, micro silica aggregates, filler, chemical additives to provide a cohesive non-sag repair mortar giving a smooth finish with excellent adhesion, and polypropylene fiber to eliminate shrinkage and reduce stress at the bond line. When mixed with a specified amount of water, a trowel able mortar results that are ideally suited for interior and exterior application.

COLOUR

Grey and white.

USES

- Repair of damaged, decayed, weak or de-bonded concrete.
- Replacement of concrete that has spalled chipped or cracked.
- Repair of vertical or horizontal surfaces.
- Re-profiling of concrete or masonry.
- Filling tie rod holes.
- To correct uneven structural irregularities.

ADVANTAGES

- High strength and low shrinkage.
- Perfect bonding to existing concrete.
- Perfect protection to embedded steel.
- High resistance to freeze/thaw cycles.
- No segregation or sedimentation.
- It can be applied up to 30mm in one pass without form work. Greater thickness can be achieved using temporary form work.

TYPICAL PROPERTIES

Compressive strength (Kg/cm ²) As per ASTM C -109	250 @ 1 day 600 @ 7 days 720 @28 days
Flexural strength	7.5 Mpa @ 28 days
Bond strength	2.5 Mpa
Chloride iron content	0.01 %
Fresh wet density	Approx. 2300 kg/m ³
VOC content	< 5 g/ltr
Setting time	Initial set 4 hrs Final set 8 hrs

APPLICATION INSTRUCTIONS

Surface Preparation:

Clean the area to be filled from all loosely adhered matter or surface contaminants (oil, grease, form release agents, dust etc.). Surfaces should be sound and in spalled areas, clear off any loose or weak concrete. Wherever possible, cut vertical shoulders at edges to accommodate repair mortar. Mechanically roughen smooth surfaces to receive repair mortar.

Priming:

If corrosion is observed on the surface, the possible cause may be the presence of chlorides or due to carbonation. Apply a slurry coat of cement mixed with cap super bond

Reinforcing steel priming

Where a reinforcement coating is required as an active corrosion protection barrier, apply one full coat of Capoxy Zincrich Primer and allow to dry before continuing.

Substrate:

For optimum adhesion, mix cement with **cap super bond** to a stiff slurry of brush able (not watery) consistency. Brush the slurry into the area to be patched. Do not allow the slurry coat to dry and immediately fill with a stiff **CAP PATCH-HS** mix.

Mixing:

CAP PATCH-HS IS mixed by adding the dry powder to a measured volume of 2.5 – 2.6 liters of water per bag. Mix thoroughly with a suitable paddle mortar mixer or mix small quantity by hand and trowel. Mix slowly until lump free consistency is achieved. At a time mix only a sufficient quantity of material that can be placed in 15 minutes. **CAP PATCH-HS** should be mixed to a stiff paste like consistency. No tempering by the addition of additional liquid should be attempted. Clean the vessel frequently to avoid build up.

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Application:

Begin application of **CAP PATCH-HS** immediately after mixing and work thoroughly into the repair surface. Compact well to secure proper bonding. Application can be done by trowel or by a rubber gloved hand. If desired overfill, allow to firm and shave appropriately. Finish with steel trowel until the applied surface becomes smooth and level with surrounding surface. Do not over work and minimize troweling. Minimum application thickness is 5mm. Do not featheredge. Maximum lift recommended is 25mm. For depth greater than 25mm, successive lifts are mandatory. Score the lifted surface and allow adequate curing time before installing additional lifts.

Curing:

CAP PATCH-HS should be cured in accordance with good concrete practice by application of a suitable **Ahlia's** curing membrane or by wet burlap. Protection against rapid drying from wind, sun or excessive heat is necessary.

COVERAGE

20 kg of **CAP PATCH-HS** will yield approximately **9.5** liter of mortar.

Cleaning:

CAP PATCH-HS should be removed from tools, equipment, and mixers with clean water immediately after use.

Note:

- Do not apply **CAP PATCH-HS** below 4°C or above 35°C.
- The temperature will affect setting time and cure rate. A factor that may cause poor material performance includes extremely hot and cold substrates during and up to 48 hours following application.
- Optimum performance of **CAP PATCH-HS** will not be attained in cases like failure to dampen the substrate, failure to provide key in the patch to achieve proper bond, failure to bridge moving cracks or joints, presence of bond-breaking agents in the substrate, premature loading, improper curing, failure to use the correct quantity of mixing liquid and other failures to follow good application practices.

PACKAGING

CAP PATCH-HS is supplied in 20kg bags.

STORAGE

CAP PATCH-HS should be stored over pallets in a cool dry place.

SHELF LIFE

12 months in unopened bags.

SAFETY PRECAUTIONS

CAP PATCH-HS does not contain toxic materials. Care should be taken to avoid inhalation of dust and to prevent material entering into eyes.

TECHNICAL SERVICE:

Our Technical Service Department is available at any time to advise you in the correct use of this product or any other Ahlia products.

Note : The information presented herein is based on the best of our knowledge and expertise for which every effort is made to ensure its reliability. Although all the products are subjected to rigid quality tests and are guaranteed against defective materials and manufacture, no specific guarantee can be extended because results depend not only on quality but also on other factors beyond our control.

As all Ahlia Technical Data Sheets are updated on a regular basis, it is the user responsibility to collect most recent issue.