Conpatch ® 675

ONE PART LIGHT WEIGHT POLYMER MODIFIED REPAIR MORTAR FOR HIGH BUILD REPAIRS

DESCRIPTION

A ready to use one part light weight repair mortar. Provides excellent thermal compatibility to concrete, waterproof properties and long term durability.

Complies to EN1504 Part 9 and EN1504 Part 3.

- Principle 3 : Concrete Restoration (CR).
  Method 3.1 - Applying mortar by hand.
  Method 3.3 – Spraying concrete or mortar.

USES & ADVANTAGES

Specifically designed for vertical and overhead repairs of all sizes where high build is required. Provides excellent durability & resistance to chloride & carbon-dioxide.

Advantages include:-

- High build one application.
- Excellent bond.
- Contains shrinkage compensators.
- Low permeability.
- One part & prebagged.
- Can be wet sprayed.
- No formwork required.
- Overhead & vertical repairs made easy.
- Can be applied in sections up to 80 mm.
- Suitable for potable water contact.

PROPERTIES AND COMPLIANCE

The following results were obtained at a water : powder ratio of 0.19 and temperature of 25ºC.

Appearance: Grey powder

Fresh Wet Density: Approx. 1,400 kg/m^3 depending on actual consistency used.

Setting Time: Initial 2.00 hours
ASTM C191-01a / ASTM C807 Final 4.50 hours

Compressive Strength: Approx. 26 - 28 N/mm^2
ASTM C109 at 28 days

Carbon Dioxide Barrier 10 mm. of Conpatch 675:
Equivalent to 800 mm of concrete

Chemical Resistance:
Reduces dramatically chemical attack due to low permeability. Impermeable to acid, gases, water borne chlorides, ions and oxygen. Chloride diffusion is very low. Chloride diffusion < 2 x 10^{-10} cm^2/sec.

Drying Shrinkage: < 400 micro strain at 7 days
ASTM C490 < 580 micro strain at 28 days
BS 6319 Part 7

Fire Rating: Non combustible

Coefficient of Thermal Expansion: 7 to 12 x 10^{-6}/ºC

Water Absorption: 10 minutes 0.002 ml/m^2/sec.
ISAT 2 hours 0.001 ml/m^2/sec.

Chloride Diffusion: < 2 x 10^{-10} cm^2/sec.
Tested to BS 6319 Part 2, 6 & 7.

Pot life: 25-35 min @25ºC.

EN Requirements

Requirements as per EN 1504-3 Class R3

(Tested at Water : Powder ratio = 15.5%)

	Test Method	Result	Requirements (R3)
Compressive Strength	EN 12190	>25 N/mm^2 (Mpa)	≥ 25 N/mm^2 (Mpa)
Chloride Ion Content	EN 1015-17	< 0.009 %	≤ 0.05 %
Capillary Absorption	EN 13057	0.11 kg.m^{-2}.h$^{-0.5}$	≤ 0.5 kg.m^{-2}.h$^{-0.5}$
Carbonation Resistance	EN 13295	Lower than control	dk ≤ control concrete
Adhesive Bond	EN 1542	2.0 N/mm^2 (Mpa)	≥ 1.5 N/mm^2 (Mpa)

APPLICATION INSTRUCTIONS & SURFACE PREPARATION

Saw cut repair area to a depth at least 10 mm. to avoid feather edges. Break out repair area.

Clean surface remove unsound concrete, dust, oil, paint, grease, algae, etc. The surface must be left clean & roughened.

Steel should be cleaned to bright condition & primed using 2 coats **of Congard Zinc** or **Congard ST**.

Thoroughly soak the concrete with water prior to applying **Cormix Latex** bonding bridge. Work well into the surface. (Remove excess water before applying the bonding bridge).

Do not allow bonding bridge to dry out work wet on wet. If it dries out remove & reprime. **Cormix Latex** bonding bridge is not required in all circumstances consult Cormix Technical Dept.

BONDING BRIDGE

Apply **Cormix Latex** / cement bonding slurry or **Condur EA2** to the prepared surface and whilst still tacky apply **Conpatch 675.**

MIXING

Ensure thorough mixing in a forced action mixer or with a heavy duty drill (400/500 rpm.). Do not use free fall mixers or part bags.

Use 3.1 litre of clean water. Put the water into the mixer & add an 18 kg bag of **Conpatch 675**, mix for 3-5 minutes. Always add powder to water. The maximum water content should be 3.25 litre per 18 kg bag.

Conpatch ® 675

ONE PART LIGHT WEIGHT POLYMER MODIFIED REPAIR MORTAR FOR HIGH BUILD REPAIRS

APPLICATION

Apply **Conpatch 675** to the prepared area by hand or trowel. Work a thin layer into the primer then build until the required depth. On vertical & overhead surfaces build may be as high as 50-80 mm. without formwork. If high build is required work in layers. If sagging takes place reapply system including primer. The minimum build for **Conpatch 675** is 10 mm. Intermediate layers should be scratched keyed & cured with water.

Spray Application

Conpatch 675 applied by wet spray provides cost saving in terms of less wastage and higher productivity & gives a more dense material.

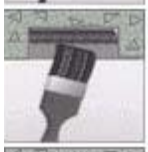
Finishing

Finish with a steel, wooden or plastic float.

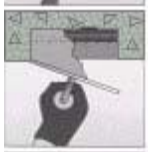
Typical System for Concrete Repair Using Conpatch Repair Mortars

Remove damaged concrete and prepare exposed steel reinforcement.

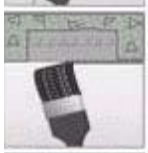
Thoroughly clean area of repair using high pressure water jet to remove all loose debris and contamination.



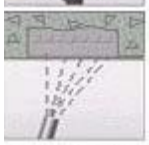
Mix and apply **Congard Zinc** to rebar allow to dry. Apply **Cormix Latex** bonding bridge if required. Apply repair material WET ON WET to bonding bridge.



Replace damaged concrete using **Conpatch 675** one component polymer modified light weight mortar, build up in layers if necessary.

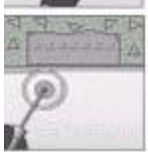


Once set firm, the repair and surrounding area coat with **Corcure 90** or **Corcure 75** curing compound.



Remove any remaining **Corcure 90** from treated area if to overcoat.

Any further leveling may be achieved with fairing material. A final coat of **Elastoclad** decorative elastomeric, anti-carbonation coating will prevent the ingress of water chlorides and other aggressive influences, effectively halting the carbonation process. **Elastoclad** is water vapour permeable, allowing the substrate to breathe, and has excellent elasticity, bridging dynamically moving cracks even at low temperatures.



CURING

Cure immediately after finishing with a curing compound e.g. **Corcure 90.** Large areas should be cured as work progresses. Do not use wax or P.V.A. based curing compounds if the surface is to be overcoated.

OVERCOATING

Conpatch 675 may be overcoated with most coating systems e.g. **Elastoclad** anti carbonation coatings.

LIMITATIONS

Conpatch 675 is not appropriate where high strengths are required or in trafficed areas (see properties). Do not mix part bags.

COVERAGE YIELD

Conpatch 675	14 - 15 litre : 18 kg bag. Approx. 1.5 m^2 at 10 mm thickness
Congard Zinc	11.8 m^2/litre at 50 micron d.f.t.
Cormix Latex	Approx. 5 m^2/litre

PACKAGING

18 kg. 4 ply plastic lined bags.

STORAGE & SHELF LIFE

Conpatch 675 has a shelf-life of up to 12 months in unopened packs kept in a dry store. If high humidity is apparent the life may be reduced to 6-8 months.

HEALTH & SAFETY

Conpatch 675 is non-toxic but is alkaline in its nature. Avoid inhalation of dust and contact with skin and eyes. Wear suitable protective clothing, gloves and eye protection and dust mask. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. When in contact with skin rinse with clean water and cleanse with soap and water.

Conpatch 675 is non-flammable.

TECHNICAL SERVICE

The Cormix International Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

QUALITY ASSURANCE

ISO 9001: 2015 verified by TUV Nord.
ISO 14001 : 2015 verified by Lloyd's Register International.

CONTACT DETAILS

Cormix International Limited
89 Romklao Rd., Sansab, Minburi, Bangkok 10510
Tel. (66 2) 917 3955-8, 117 3396
Fax. (66 2) 917 3959
http://www.cormix.com
E-mail: info@cormix.com