

## Conpatch® 600HS

ONE PART HIGH STRENGTH STRUCTURAL REPAIR MORTAR WITH CORROSION INHIBITOR

### DESCRIPTION

**Conpatch 600HS** is a ready to use spray or hand applied fibre reinforced, polymer modified high strength repair mortar.

**Conpatch 600HS** is developed with an integral corrosion inhibitor that migrates through the concrete to form a passive layer on the reinforcement providing additional protection from chlorides and other salts.

**Conpatch 600HS** is suitable for structural repairs in buildings, marine structures, bridges and other infrastructure. It is suitable for structural strengthening and preserving/restoring passivity according to EN 1504-9 principle 3, 4 and 7.

### USES & ADVANTAGES

**Conpatch 600HS** is a fine, ready to use repair mortar for repairing concrete surfaces including honeycombs, surface defects and minor damage. It can also be used to repair corrosive damage to concrete surfaces.

#### Advantages include:-

- Structural repair mortar.
- Easy to apply. Excellent workability.
- Non shrink. Non toxic. Non corrosive.
- Water & weatherproof.
- Reduces carbonation significantly.
- Excellent adhesion and mechanical strengths.
- Contains no chlorides or salts that may cause corrosion.
- Gives better control and cost saving over two part systems.
- Good colour matching to concrete.
- Non sagging.
- Good resistance to chlorides & sulphates.
- Contains fibres to reduce micro cracking and improve durability.
- Provides effective protection to reinforcement by the incorporation of a corrosion inhibitor.
- High and early mechanical strength.
- Can be applied up to 65 mm thick in single layer.
- Suitable for spray and trowel applied application.
- Also be used as dry pack mortar for various application by adjusting the water content of the mix.
- Complies with class R4 of EN 1504-3 repair mortar.

### PROPERTIES AND COMPLIANCE

<b>Component:</b>	Single
<b>Appearance:</b>	Grey powder
<b>Compressive Strength:</b> (ASTM C109)	47 N/mm <sup>2</sup> at 1 day 75 N/mm <sup>2</sup> at 28 days
<b>Flexural Strength:</b> (BS 6319 part 3)	10 N/mm <sup>2</sup> at 28 days
<b>Tensile Strength:</b> (BS 6319 part 7)	6 N/mm <sup>2</sup> at 28 days
<b>Fresh wet Density:</b>	2.25±0.05 kg/ltr.
<b>Slant Shear Bond Strength:</b> (ASTM C882)	> 10 N/mm <sup>2</sup>
<b>Water Absorption ISAT:</b> (BS 1881-208)	< 0.004 ml/m <sup>2</sup> /sec at 2 hrs.
<b>Water Penetration:</b> (BS EN 12390-8)	< 7 mm
<b>Drying Shrinkage:</b> (ASTM C157)	<500 micro strain @ 28 days
<b>Rapid Chloride Permeability:</b> (ASTM C1202)	very low (<800 Coulombs)
<b>Working Time:</b>	20-30 min.

*Note: The above data is typical under laboratory conditions with water to powder ratio of 0.14. These do not constitute a specification and field trials are recommended.*

### SUBSTRATE PREPARATION

The substrate should be clean & sound. Remove dirt, dust, oil, grease, laitance, sealers, release agents, curing compounds & paints.

Exposed rebar should be cleaned & protected with **Congard Zinc**.

The concrete should be presaturated for preferably 6 hours with water before application.

### PRIMING

Priming is not normally required. Surfaces to receive **Conpatch 600HS** should be well saturated with water for at least 24 hrs before application. Where soaking with water is difficult, as an alternative method **Conmix Latex** can be used as a bonding bridge.

### MIXING

**Conpatch 600 HS** is simply mixed with water to yield a stiff easily workable compound with shrinkage compensating properties.

The quantity of water depends on the desired consistency but as a guide we recommend 13-15% by weight of **Conpatch 600 HS**.

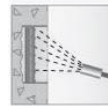
Mix with a paddle mixer or trowel for at least 3 minutes to ensure a homogenous lump free material is achieved.

Do not try to remix the product after losing workability by the addition of more water.

### Typical Procedure 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. Fingers should be able to be fitted behind rebar.



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 600HS** one component polymer modified 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.

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## METHOD OF USE

Apply **Conpatch 600HS** with a trowel, spatula, float or by spray. By hand press hard. Work up to recommended thickness in a single layer. Thicker repairs may be achieved by working in layers.

## CURING

To prevent rapid surface drying and crazing, use a suitable curing compound from Cormix's **Corcure** range e.g. **Corcure 90**.

## APPLICATION THICKNESS

	<u>Horizontal</u>	<u>Vertical</u>	<u>Overhead</u>
Min	5 mm	5 mm	5 mm
Max	65 mm	50 mm	30 mm

## YIELD

12.4 ltr/25 kg.

## COVERAGE

2.2-2.3 kg/m<sup>2</sup>/mm.

## LIMITATIONS

- During hot weather use chilled water for better workability.
- It is recommended to take adequate measures during placing at high temperatures.
- Properties may change for spray application for the cured material.
- Do not add water or rework with the mixed material which has begun to set.

## PACKAGING

25 kg. 4 ply plastic lined bags.

## STORAGE & SHELF LIFE

**Conpatch 600HS** 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 6-9 months.

## HEALTH & SAFETY

**Conpatch 600HS** is non-toxic but is alkaline in its nature. When applying gloves & goggles should be worn. Wash off splashes to skin with water. If in eyes wash out with plenty of clean water and seek medical attention. **Conpatch 600HS** 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: 2008 verified by TUV Nord.



Cormix International Limited  
89 Romklao Rd, Sansab,  
Minburi, Bangkok 10150  
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1012-CPD-0103  
**EN 1504-3 (R4)**  
**Structural and non-  
structural repair**

Compressive Strength: ≥ 45 MPa  
Chloride ion Content: ≤ 0.05 %  
Adhesive bond: ≥ 2.0 MPa  
Resistance Shrinkage: ≥ 2.0 MPa  
Carbonation Resistance: dk ≤ control  
Concrete  
Elastic modulus: ≥ 20 GPa  
Capillary Absorption: ≤ 0.5 kg/m<sup>2</sup>/h<sup>-0.5</sup>

## CONTACT DETAILS

**Cormix International Limited**  
89 Romklao Rd., Sansab, Minburi, Bangkok 10510  
Tel. (66 2) 917 3955-8, 543 8890  
Fax. (66 2) 917 3959, 543 8891  
<http://www.cormix.com>  
E-mail: [info@cormix.com](mailto:info@cormix.com)