

## Conpatch® 600MCI

ONE PART POLYMER MODIFIED STRUCTURAL REPAIR MORTAR INCORPORATING A CORROSION INHIBITOR

### DESCRIPTION

A ready to use low shrinkage economical one component polymer modified structural repair mortar containing fibres and silica fume. **Conpatch 600MCI** contains specially selected materials to provide a fine, smooth repair material and a corrosion inhibitor to protect reinforcement.

**Conpatch 600MCI** 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 600MCI** 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. Complies to EN1504 part 9 and EN1504 Part 3 class R4 and Part 4.

- Principle 3 : Concrete Restoration (CR).  
Method 3.1 - Applying mortar by hand.  
Method 3.3 - Spraying concrete or mortar.
- Principle 4 : structural strengthening (SS).  
Method 4.4 - Adding mortar or concrete.
- Principle 5 - Increase in physical resistance (PR).  
Method 5.3 - Adding mortar or concrete.
- Principle 7 : Preserving or restoring passivity (RP).  
Method 7.1 - Increasing cover to reinforcement with additional concrete or mortar.  
Method 7.2 - Replacing contaminated or carbonated concrete.

### USES & ADVANTAGES

**Conpatch 600MCI** is a fine, ready to use repair mortar for repairing concrete surfaces including small honey-combs, surface defects, blowholes 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.
- Suitable for hand and machine application.
- Good colour matching to concrete.
- 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.
- Long term rebar protection.
- Provide 3 times rebar life extension.

### PROPERTIES AND COMPLIANCE

<b>Appearance:</b>	Grey powder
<b>Compressive Strength:</b>	≥50 N/mm <sup>2</sup>
ASTM C109	after 28 days at 25°C
<b>Bond Strength to Concrete:</b>	≥ 2 N/mm <sup>2</sup> (concrete failure)
ASTM D4541	after 28 days at 25°C
<b>Drying Shrinkage:</b>	<400 micro strain at 7 days
ASTM C490	<560 micro strain at 28 days
<b>Coefficient of Thermal Expansion:</b>	11 x 10 <sup>-6</sup> /°C
<b>Pot life:</b>	30-40 min @ 25 °C

**Water Absorption ISAT:** 10 mms < 0.007 ml/m<sup>2</sup> /sec  
BS 1881 Part 5, 2 hours < 0.0045 ml/m<sup>2</sup> /sec

*Note: Properties depend on water content and are typical under laboratory conditions.*

### 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.

Substrate temperature : +5°C min +35°C max.

Ambient temperature : +5°C min +35°C max.

### PRIMING

Priming is not normally required. Surfaces to receive **Conpatch 600MCI** should be well saturated with water first.

### MIXING

**Conpatch 600MCI** 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 16-18% by weight of **Conpatch 600MCI**.

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 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. 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 600MCI** 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.

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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.

## METHOD OF USE

Apply **Conpatch 600MCI** with a trowel, spatula, float or by spray. By hand press hard. Work up to 20 mm. in one 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**.

## CONSUMPTION

Approx. 2 kg/m<sup>2</sup>/mm.

## PACKAGING

25 kg. 4 ply plastic lined bags.

## STORAGE & SHELF LIFE

**Conpatch 600MCI** 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 600MCI** 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 600MCI** 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.

## CONTACT DETAILS

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