

# Conpatch® MC

## SINGLE COMPONENT FREE FLOWING SHRINKAGE COMPENSATED LOW ALKALI MICRO CONCRETE

### DESCRIPTION

**Conpatch MC** is a high strength, free flowing, shrinkage compensated concrete with low alkali content. The product is manufactured using especially selected cement, aggregates, fillers & polymers to provide a stable, free flowing micro concrete with controlled expansion both in wet & hardened states. It exhibits excellent thermal compatibility with concrete. Low water contents ensure a dense, durable & high strength material is achieved. Meets the requirements of EN 1504-3 class R4.

### USES & ADVANTAGES

**Conpatch MC's** fluid properties ensures compaction and vibration are not required, its density provides excellent chloride and carbon dioxide resistance & reduces the incidence of alkali - silica reaction and sulphate attack.

Uses as a result of these properties include:-

- Pile cap repair.
- Repair of large sections including marine structures, bridges and beams etc.
- Difficult access locations where hand application is not feasible.
- As a repair material where cathodic protection is used.
- In applications where poured under pressure.
- Filling voids/sections up to 250 mm (consult Cormix for deep sections).

#### Advantages include:-

- Excellent bond to concrete.
- Can pump or pour.
- Self-compacting, no vibration eliminates honey combing.
- High early & final strengths.
- Shrinkage compensated both wet & hardened state.
- Low permeability provides excellent protection against chloride & carbon dioxide.
- Low alkali content.
- Meets the requirements of EN 1504-3 class R4.

### PROPERTIES

<b>Appearance:</b>	Grey Powder
<b>Compressive Strength:</b>	≥ 30 N/mm <sup>2</sup> at 1 day ≥ 50 N/mm <sup>2</sup> at 3 days ≥ 65 N/mm <sup>2</sup> at 28 days
ASTM C109	J-rote 8-10 seconds
<b>Flow Properties:</b>	<450 micro strain at 7 days
<b>Drying Shrinkage:</b>	<500 micro strain at 28 days
ASTM C490	10 mins 0.018 ml/m <sup>2</sup> /sec.
<b>Water Absorption:</b>	2 hours 0.001 ml/m <sup>2</sup> /sec.
BS 1881 pt.5	Approx. 2220 kg/m <sup>3</sup>
<b>Wet Density:</b>	depending on consistency used

**Rapid Chloride Permeability:** <650 coulombs  
ASTM C1202

**Yield :** 77-78 x 25 kg bag/m<sup>3</sup> of grout

**Water by weight of grout :** 15-16%

### CE Requirements EN 1504-3 class R4

	Results in laboratory	Requirements R4
<b>Compressive strength:</b>	> 65 N/mm <sup>2</sup>	≥ 45 N/mm <sup>2</sup>
<b>Chloride ion Content:</b>	< 0.004 %	≤ 0.05 %
<b>Adhesive Bond:</b>	2.0 N/mm <sup>2</sup>	≥ 2 N/mm <sup>2</sup>
<b>Restrained Shrinkage:</b>	2 N/mm <sup>2</sup>	≥ 2 N/mm <sup>2</sup>
<b>Elastic Modulus:</b>	20 GPa	≥ 20 GPa
<b>Thermal Compatibility:</b>	2 N/mm <sup>2</sup>	≥ 2 N/mm <sup>2</sup>

### SURFACE PREPARATION

Surfaces to be repaired should be sound, clean with all contaminates such as oil, grease, dirt, paint, mould oil, curing compounds etc. removed.

Formwork should be rigid & sealed. Drain outlets should be installed to allow drainage of water after soaking under soffits air vents should also be incorporated. Edges should be sawn out to right angles with no feather edges. Corroded steel should be exposed fully including the back. Rebar should be grit blasted or water blasted to remove rust & chlorides if present.

**Rebar Priming:** After cleaning rebar it should be primed with **Congard Zinc** or **Congard ST** depending on the surface condition.

**Substrate Priming:** Several hours before placing **Conpatch MC** the whole surface should be saturated with water by filling the prepared formwork with clean water. All excess water must be removed before applying **Conpatch MC**.

### MIXING

Mix using a forced action mixer or heavy duty slow speed drill (400-500 rpm) with spiral paddle. Never mix part bags. Add powder to water and mix for 3-4 minutes until a smooth homogenous consistency is achieved.

The water content should be between 3.75-4.00 litre per 25 kg bag. Place all the mixed material within 30 minutes of mixing do not rework material by adding more water. If weather conditions are very hot use chilled water.

No vibration is required when placing. Cure **Conpatch MC** exposed surfaces immediately & stripped surfaces with **Corcure**. In rapid drying conditions exposed surfaces may be cured with polyethene sheet taped down at edges.

Where the surface is to receive a coating or render use **Corcure 75** or **Corcure 200** which are specifically manufactured to receive finishes.

**Conpatch® MC****SINGLE COMPONENT FREE FLOWING SHRINKAGE COMPENSATED LOW ALKALI MICRO CONCRETE****PACKAGING**

25 kg. 4 Ply plastic lined bags.

**STORAGE CONDITIONS & SHELF LIFE**

Store in unopened bags in dry shaded conditions. The shelf life is 9-12 months when stored correctly if stored in high humidity the shelf life may reduce to 4-6 months. High temperatures and humidity may reduce shelf life.

**HEALTH & SAFETY**

Protective clothing such as gloves and goggles should be worn. Wash off material from skin with fresh water on contact. If in contact with eyes rinse with plenty of clean water & seek medical attention. If swallowed do not induce vomiting seek medical attention immediately.

**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.

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