

# Conpatch® FMM

FLOWABLE MARINE REPAIR MORTAR FOR CONCRETE BASED ON CRYSTALLINE WATERPROOFING CHEMISTRY

## DESCRIPTION

**Conpatch FMM** is a specially formulated flowable marine mortar, based on crystalline waterproofing chemistry containing fibres, silica fume, primary and secondary shrinkage compensators which is used to form a dense waterproof high strength corrosion resistant repair mortar for marine environments.

**Conpatch FMM** is used for the structural repair and reprofiling of large vertical, horizontal, and overhead sections in marine structures.

## USES & ADVANTAGES

**Conpatch FMM** is especially formulated for use in the repair of large voids and sections in an aggressive marine environment. It is used to protect concrete structures in coastal environments subjected to chloride and sulphate exposure in splash and tidal zones. It is a flowable mortar based on the latest construction chemicals chemistry.

### Advantages include:-

- Protects and waterproofs with crystalline waterproofing chemistry.
- Surrounding concrete improved.
- Especially formulated for large area pouring or pumping repairs
- Dense mortar matrix to provide protection against the ingress of water, chlorides and sulphates.
- Fibre reinforced to reduce micro cracks and increase tensile and impact strength.
- Similar properties to the host concrete
- Excellent adhesion to substrate
- High strength
- Low shrinkage and high bond strength to achieve a monolith repair.
- Non toxic.
- One part, easy to mix and place.
- Silica fume modified repair mortar.
- Contains primary and secondary shrinkage compensators.
- Complies with BSEN 1504-3 Class R4

## PROPERTIES

**Appearance:** Grey powder  
**Bulk Density:** Approx. 1.66-1.70 kg/litre  
**Yield:** Approx. 78 x 25 kg/bags/m<sup>3</sup> of mortar @ 15% water content

Expansion of up to 1% or greater in unset material according to ASTM C940.

Drying shrinkage is compensated for complying with the requirements of ASTM C1107, type C.

**Rapid Chloride Penetration:** < 800 Coulombs  
ASTM C1202 at 28 days

**Sulphate Resistance :** Significantly Improved.  
ASTM C1012

**Compressive Strength :** ≥ 60 N/mm<sup>2</sup> at 28 days

**Crack sealing :** 0.5 mm at 28 days

**Permeability :** No leakage at 5 bar  
BSEN 12390 Part 8 / DIN 1048 Part 5

**Bond Strength to Concrete** ≥ 2 N/mm<sup>2</sup> after 28 days  
ASTM D4541 (concrete failure)

## SURFACE PREPARATION

Surfaces should be clean, sound and free from oil, grease, laitance and loose particles. Metal surfaces should also be clean & free from rust, oil & grease.

## MIXING

**Conpatch FMM** is a pre-mixed non-shrink pourable mortar. Pour 3.75 litres of water into a mixing container and add 1 bag of **Conpatch FMM** gradually whilst mixing (max. 400 R.P.M.), mix for 3-5 minutes until lump free.

Do not add more than the maximum water content. This will result in loss of strength and possible segregation.

## APPLICATION

Ensure the substrate is correctly prepared. No contamination and saturated with water at least 3 - 4 hours prior to pouring the mortar. No free water should be left standing. During application ensure air entrained into the mortar is able to escape through relief holes. Maintain continuous head, mortar flow should not be interrupted.

## CURING

To prevent rapid surface drying and crazing, use a suitable curing compound such as **Corcure 90**.

## IMPORTANT

- Air relief holes should be used.
- Min. gap 5 mm up to max. 150 mm.
- Cure the mortar.
- Formwork should be secure, do not allow mortar loss.
- Temperatures will affect the setting time and strength gain.

In temperatures over 35°C ice or chilled water may be used.

*Note :- For large & deep volume pours saturated 10 mm down aggregate can be mixed with mortar in the ratio of 1:1 or 1:2 as per site required conditions.*

## CONSUMPTION

78 x 25 kg bags & 292 litres of water for approx. 1 m<sup>3</sup> of mortar.

## CLEANING

Clean all tools with water immediately after use.

## PACKAGING

25 kg bag. 4 ply plastic lined bags.

## STORAGE & SHELF LIFE

Store in dry shaded conditions. The shelf life is at least 9 months if kept dry in original packaging. High temperatures and humidity may reduce shelf life.

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## HEALTH & SAFETY

**Conpatch FMM** is alkaline avoid contact with skin & eyes. Gloves, goggles and dust mask should be worn. Remove from skin with soapy water. Splashes in the eyes should be washed out with copious amounts of clean water and medical attention sought. **Conpatch FMM** is non-flammable.

## TECHNICAL SERVICE

The Cormix International Limited 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.

## DISCLAIMER

Performance data is achieved testing in accordance with International Standards. Testing by others may result in different results from those published as a result of external factors such as poor sampling, incorrect mixing, varying temperatures, curing, crushing procedures etc. Cormix does not take responsibility nor need to defend others testing that does not achieve the published data. The user must test the products suitability for the intended application and purpose. Cormix reserves the right to change the properties of the product. Site conditions and differences in materials are such that no warranty or fitness for a particular purpose, nor liability can be inferred from the published data sheet, written recommendations or from other advise offered.

## CONTACT DETAILS

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