

# Nitocote CM210

Elastomeric cementitious coating

## Use

Nitocote CM210 provides a cementitious, elastomeric coating with inherent crack-bridging ability. Typical applications include :

- Potable water retaining structures.
- Potable water excluding structures.
- Internal basement waterproofing.
- Drainage culverts.

## Advantages

- Withstands high positive and negative hydrostatic pressures
- Excellent crack accommodation before and after immersion
- Approved for use in contact with potable water
- Excellent bond to concrete and masonry
- Long working life
- Easy application by brush, trowel or spray
- Bonds to green or damp concrete

## Standards compliance

Nitocote CM210 complies with:

BS 6920: 1990 Effect on Water Quality.

Water Byelaws Scheme approved, product listing No. 9509517

DIN 1048: Water Penetration Test.

Fire Tested to BS 476: 1987 Parts 6 and 7.

## Description

Nitocote CM210 two-component polymer modified cementitious coating is supplied in pre-packaged form. The product is designed to be easily mixed on site using a slow speed drill fitted with a mixing paddle and then applied to the substrate using either brush, trowel or spray. Roller application may also be used, however finishing the surface with a trowel is recommended for best results.

Nitocote CM210, available in grey and white, cures to form an elastomeric impermeable membrane.



# Nitocote CM210

## Specification

The waterproofing coating shall be Nitocote CM210, an elastomeric cementitious coating approved under the UK WBS (WRc Listed) Scheme No. 9509517. The cured coating, after immersion, shall be capable of withstanding cracked substrate cyclic movement from 0 - 300 - 0 microns at 15°C for 6,000 cycles without failure. It shall have the capability to resist a positive water pressure of 7 bar and a negative water pressure of 3 bar when tested to DIN 1048.

## Properties

Typical properties of mixed material

<b>Pot life at 20°C:</b>	2 hours
<b>Pot life at 35°C:</b>	1 hours
<b>Colour:</b>	Grey or White
<b>Mixed density:</b>	1850 kg/m <sup>3</sup>
<b>Minimum application temperature :</b>	5°C

Properties of cured coating (21 days cure at 23°C, followed by 28 days immersion at 23°C).

The values obtained are for Nitocote CM210 when applied in two coats each of 1 mm wet film thickness

<b>Resistance to positive water pressure (DIN 1048):</b>	7 bar (70m head of water)
<b>Resistance to negative water pressure (DIN 1048):</b>	3 bar (30m head of water)
<b>Static crack accommodation:</b>	0.9 mm
<b>Dynamic crack<sup>1</sup> accommodation capability 0 - 300 - 0 microns cycling after 28 days immersion (University of Surrey method) –</b>	
15°C :	6,000 cycles (no failure)
0°C :	6,000 cycles (no failure)
-12°C :	6,000 cycles (no failure)
<b>Abrasion resistance (ASTM D 4060) :</b>	Wear Index 1 (equivalent to 40 N conc.)
<b>CO<sub>2</sub> diffusion resistance (Taywood method) after 5000 hours QUV<sup>2</sup> :</b>	>50m

**NOTE 1 :** Nitocote CM210 will bridge an existing crack of up to 0.5 mm in width.

**NOTE 2 :** UV test required coating to be exposed to 4 hrs. condensation at 50°C followed by 4 hrs. UV light at 50°C. Total exposure time was 5,000 hours.

## Instructions for use

### Preparation

All surfaces which are to receive the coating, must be free from oil, laitence, grease, wax, dirt or any other form of foreign matter which could affect adhesion. Typically, concrete surfaces can be cleaned using high pressure water jet or grit blasting. palled surfaces or those containing large blowholes, cracks and other such defects up to 10 mm depth, should be repaired using Nitocote CM210. For further advice on suitable repair mortars for larger scale repairs, contact the local Fosroc office.

### Mixing

The liquid polymer (5 kg) is poured from the plastic container into a plastic or metal drum having a volume of at least 20litres. To this, the powder is gradually added (18 kg) whilst mixing with an approved spiral paddle attachment on a slow speed drill. Mixing is continued until a lump free slurry is obtained. This should take a minimum of 3 minutes and maximum of 5 minutes.

### Application

Pre-dampen the substrate surface with water. High porosity substrates will require more dampening than dense substrates. Any condensation should be removed using a sponge. Any running water should be stopped with Renderoc Plug. Contact the local Fosroc office for further advice on other suitable water stopping materials.

When the concrete surface is damp, apply the material using a soft bristled brush (120 mm-200 mm wide) or trowel. The first coat should be applied at a minimum wet film thickness of 1mm (approximate coverage is 1.9 kg/m<sup>2</sup>) and should be well brushed into the surface.

Finish in one direction for a neat appearance. If the brush begins to drag during application, do not add water to the material, but dampen the surface again. Application may also be made by roller, however it is recommended to finish the surface with a trowel for best results.

The first coat should be allowed to cure for a minimum of 5 hours at 20°C or 3 hours at 35°C and longer at lower temperatures. The material should not be applied at temperatures below 5°C. All the mixed material should be used within 2 hours at 20°C or 1 hour at 35°C.

The second coat should also be applied at a minimum wet film thickness of 1 mm and finished in one direction. Pre-dampening of the surface is not necessary when applying the second coat.

# Nitocote CM210

---

## Spray application

For spray application the substrate should be prepared in the same manner as for brush application and the material should again be applied in two coats. Each coat should be a minimum of 1 mm thickness. Allow a minimum of 5 hours cure at 20°C or 3 hours at 35°C between the first and second coats, or longer at lower temperatures. For further details on the selection of spraying machines and nozzles consult the local Fosroc office.

## Disposal

Waste mixed material should be allowed to harden overnight then disposed of as non-hazardous waste.

## Cleaning

Immediately after application is completed clean all tools and equipment with clean water. Hardened material can be removed by mechanical means and by use of Fosroc Solvent 102.

## Limitations

- Nitocote CM210 should not be applied if the air of substrate temperature is greater than 45°C. This may result in different colour shades.
- Do not proceed with application when rainfall is imminent unless in a sheltered or protected location. The product should not be exposed to moving water during application.
- Nitocote CM210 should not be used on external surfaces where aesthetic appearance is critical as differences in cure/drying rate may cause slight colour differences in the final surface.
- Nitocote CM210 should not be used for applications subject to direct exposure to seawater.
- If any doubts arise concerning temperature or substrate conditions, consult the local Fosroc Office.

## Technical support

Fosroc offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

## Estimating

### Supply

---

<b>Power component (grey or white):</b>	18 kg bag
<b>Liquid polymer component:</b>	5 kg container

---

### Coverage<sup>1</sup> (at nominal 1 mm thickness)

---

<b>Brush, roller, trowel application :</b>	10.8-11.7 m <sup>2</sup> per 23 kg
<b>Spray application :</b>	9.0-11.7 m <sup>2</sup> per 23 kg

---

**NOTE 1 :** A minimum coverage of 3.8 kg/m<sup>2</sup> applied in not less than 2 coats is recommended.

## Storage

Shelf life is 6 months in unopened packs stored below 35°C in a shaded environment. The liquid component must not be allowed to freeze.

## Precautions

### Health and safety

Nitocote CM210 powder is irritating to eyes, respiratory system and skin. Avoid inhalation of dust, wear suitable respiratory protective equipment.

Nitocote CM210 liquid is not classified as dangerous.

Nitocote CM210, when mixed, becomes highly alkaline, wear suitable protective clothing, gloves and eye protection.

For both components and mixed material avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

# Nitocote CM210

---

## Additional information

Fosroc manufactures a wide range of complementary products which include:

- waterproofing membranes & waterstops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialized flooring materials

Fosroc additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Fosroc systematic approach to concrete repair features the following:

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Fosroc office – as below.



## Fosroc (Thailand) Limited

777/9 Moo 7,  
Bangplee-Tamru Road,  
Bangplee Yai, Bangplee,  
Samutprakarn 10540 Thailand

[www.fosroc.com](http://www.fosroc.com)

### Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it.

**telephone:**  
+66 (0)2325 0913-15

**fax:**  
+66 (0)2337 3551

**email:**  
thailand@fosroc.com