



NATCEM AC

Description

NATCEM AC is an Environmentally Friendly, fast setting mortar suitable for installation up to any thickness from a minimum of 3mm. The product consists of a blend of Natural Cement binder, retarder and specially selected graded aggregates all passing a 250 micron sieve. The product is suitable for a wide range of applications and can be applied by trowel, brush, roller or pumped.

Uses

- Concrete repair
- Grouting / void filling
- Anti-carbonation coating
- Infill surface imperfections
- In contact with potable drinking water
- Sewers / Wastewater environments
- Suitable for use underwater
- Pointing
- Use in rivers & canals
- Environmentally sensitive areas
- Conservation of historic buildings

Properties

- Fast setting with rapid strength gain
- Only requires the addition of water
- Provides a fine surface
- Sulphate resistant
- Resistant to chloride penetration
- Waterproof
- Approved for use in Public Water Supplies
- Sets underwater
- Can be used down to 0 degrees
- Environmentally Friendly
- Very low shrinkage
- Fast cure - can be over-coated one hour after set



NATCEM AC

Method of use

Preparing the surface

Do not use on frozen or overheated substrates (Outside the range of 0°C-30°C). Prepare the surface in advance to provide an adequate key. It should be clean, free from dust and thoroughly dampened. Where necessary steel or aluminium mesh can be used. Ensure that a 3mm minimum thickness of material is obtained.

Priming

There is no need to prime any reinforcement, but if priming is preferred, any conventional system may be used.

On reinforcement it is only necessary to remove the loose rust, which can be done by wire brushing.

Application

General

Place the material as quickly as possible after mixing using traditional tools. A 3mm minimum thickness of the material is always necessary. DO NOT apply additional water to the surface during finishing as this may cause surface cracking. Once setting has started DO NOT attempt to remix or to smooth the surface, this will cause the mechanical properties in particular strength and adhesion to be lost.

Mixing

APPLICATION BY TROWEL

If one bag or less is to be mixed it should be mixed with a rose bud type paddle attached to an electric drill (900 rpm, 1000 W). Mix vigorously for at least 2 minutes after adding all the mixture to the water. NATCEM AC is designed to give a fluid mix but this only develops after sufficient mixing. For larger quantities, optimum mix results can be obtained using conventional mixing machines. When applying by plastering methods, add the NATCEM AC gradually to **5 litres of clean water per bag**, whilst mixing continuously. **The mix will appear dry at first.** Continue mixing until fluidity develops. If greater fluidity is required additional water may be added to a **total of 5.5 litres per bag**. Exceeding this ratio will lead to lower strength and a longer setting time. In cold weather the set can be accelerated using warm water, likewise in hot weather cold water can be used to slow down the set.

APPLICATION BY BRUSH OR ROLLER

If one bag or less is to be mixed it should be mixed with a rose bud type paddle attached to an electric drill (900 rpm, 1000 W). Mix vigorously for at least 2 minutes after adding all the mixture to the water. NATCEM AC is designed to give a fluid mix but this only develops after sufficient mixing. For larger quantities, optimum mix results can be obtained using conventional mixing machines. When applying by brush or roller methods, add the NATCEM AC gradually to **6 litres of clean water per bag**, whilst mixing continuously. **The mix will appear dry at first.** Continue mixing until fluidity develops. If greater fluidity is required additional water may be added to a **total of 6.5 litres per bag**. Exceeding this ratio will lead to lower strength and a longer setting time. In cold weather the set can be accelerated using warm water, likewise in hot weather, cold water can be used to slow down the set. When applying by brush or roller, two coats may be necessary to ensure no pinholes and adequate 3 mm minimum thickness. Ensure that the first coat has set prior to application of the second coat and that the surface of the first coat is well wetted prior to the application of the second coat.

Setting times

NATCEM AC is designed to commence setting at 35 minutes and finish setting at 40 minutes at 20°C. In winter NATCEM AC can be used down to 0°C. The set will be slower but can be accelerated by using warm water. In very hot temperatures the set will be faster and can be slowed by using cold water.

Cleaning

NATCEM AC should be removed from tools and equipment and cleaned with water immediately after use.

Storage

NATCEM AC is packaged in a polythene inner bag with re-sealable tie in a stitch sealed woven polypropylene outer bag that should be stored in dry conditions and will remain usable for at least twelve months.

Yield

Generally 1 x 25kg bag of NATCEM AC mixed with 5 litres of water will produce approximately **15** litres of finish mortar.

Disposal of Waste

Via an authorised waste disposal contractor to an approved waste disposal site, observing all local and national regulations.

How to specify

NATCEM AC shall be mixed and applied to prepared surfaces all strictly in accordance with the manufacturer's instructions.

Precautions

We strongly recommend the use of GLOVES, GOGGLES and MASK. Please see SDS sheet for full details.

Approved for use in public water supplies

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See IFU Document Issue 3 - 10/01/20

Setting time & strength gain

Start Set	35 Min	at 20°C
End Set	40 Min	at 20°C
		Compressive Strength (Mpa)
1 Hour		4
3 Hours		5
24 Hours		9
7 Days		13
28 Days		32
Strength continues to develop thereafter.		



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