

NATCEM® AC

Product Data Sheet



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 a 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 or pumped.

NATCEM® AC is suitable for the following Applications:

- Concrete Repair
- Grouting / Void Filling
- Anti-carbonation coating
- Infill surface imperfections
- In contact with potable drinking water
- Sewers / Wastewater environments
- Underwater use
- Pointing
- Use in Rivers & Canals
- Environmentally sensitive areas
- Conservation of historic buildings

Properties

- Fast Setting
- Rapid Strength gain
- Only requires the addition of water
- Provides a fine surface
- Sulphate resistant
- Resistant to chloride penetration
- High chemical resistance
- Waterproof
- Approved for use in Public Water supplies
- Sets underwater
- Can be used down to 0°C
- Environmentally friendly
- Very low shrinkage
- Fast cure, can be over-coated one hour after set

Yield & Coverage

Generally, 1 x 25kg bag of NATCEM® AC mixed with **5 litres of water** will produce **15 litres** of finished mortar suitable for **3m²** at 3mm depth.

Setting time & strength gain

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

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 hot temperatures, the set will be faster and can be slowed by using cold water or NATCEM SETTING RETARDER (see separate product data sheet).

Method of Use

Preparation

Do not use on frozen or overheated substrates (0° - 30°). Prepare the surface in advance, ensuring it is well roughened to provide an adequate key. Any adhesion-reducing substances such as oil, paint, bitumen, grease or laitance must be removed by suitable means. On glazed brickwork, the joints should be raked out and the surface bush hammered to form a key. The surface to which the NATCEM® AC is applied should be clean, free from dust and thoroughly dampened. Where necessary, steel or aluminium mesh can be used.

Mixing

Each bag of NATCEM® AC should be mixed with between **5 and 5.5 litres of water**. Always place the water in the mixer or mixing container and add the powder. Gradually add the NATCEM® AC to **5 litres** of clean water per bag whilst continuously mixing the material. If one bag or less is to be mixed, the NATCEM® AC can be mixed with a Rose Bud type paddle attached to an electric drill (900rpm, 1000W). 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. The mix will appear dry at first. Continue mixing until fluidity develops. If greater fluidity is required, more water up to a total of **5.5 litres** may be used. Exceeding this ratio will lead to lower strength, longer setting time and risk of surface cracking appearing.

Placing

After mixing, apply the material as quickly as possible 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.

Precautions & Storage

We strongly recommend the use of GLOVES, GOGGLES and MASKS. Full details can be provided in the Safety Data Sheet. Clean all tools with water immediately after use.

NATCEM® AC is packaged in a polythene inner bag with a resealable tie within a stitch-sealed woven polypropylene outer bag that should be stored in dry conditions and will last for at least twelve months.

Approved for use in Public Water Supplies

DWI Reg.31 Approved ref Number: 56/4/840

WRAS Approved ref Number: 250155059

Scan to see Mixing Video:



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