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EMACO® NANOCRETE FC

Cementitious polymer modified thin layer fairing mortar

DESCRIPTION

Emaco Nanocrete FC is a concrete-grey, ready-to-use mortar based on hydraulic binders, high grade quartz sands and modified with synthetic polymers. It contains no chlorides or other salts that might cause corrosion or blooming.

RECOMMENDED FOR

Emaco Nanocrete FC is especially suitable for levelling uneven surfaces, filling honeycombs and pin holes.

It can be used as a topping (render) of up to 3mm thick to face up masonry.

Emaco Nanocrete FC is an ideal substrate for coatings. It is also used for laying ceramic and concrete tiles, and as a thin bed mortar for the placement of lightweight blocks, insulation boards and hollow masonry units (HMU).

Emaco Nanocrete FC is ideal for thin resurfacing of damaged concrete surfaces, such as in rain damaged slabs and for use in non-moving crack repairs.

FEATURES AND BENEFITS

- *Economical*
- *For thin layer patching*
- *As base layer for coatings, tiles and panels*
- *Quick and easy to apply*
- *Excellent bonding*
- *Very durable*
- *Shrinkage compensated*
- *Feather edging possible*
- *Water and weatherproof*
- *High early strength*

Well mixed Emaco Nanocrete FC yields a plastic, thixotropic compound, that is easily applied. It is non-sagging on vertical surfaces or overhead. The very fine polymers ensure excellent anchorage and adhesion to the substrate and improves the water retention considerably, thus preventing the formation of cracks.

After curing, Emaco Nanocrete FC is waterproof and resistant to weather and frost. Besides high compressive strength, it offers excellent bonding and tensile strengths.

PERFORMANCE DATA

	28 days
Compressive strength	40 MPa
Flexural strength	7.0 MPa
E-Modulus	12.0 GPa
Bond (to substrate)	> 2.5 MPa
Co-efficient of thermal expansion (ASTM C531)	13 x 10^{-6} m/m/°C

SPECIFICATIONS

Supply form	powder
Water added per bag (20kg)	up to 4 litres
Colour	grey
Density (mixed)	2.0 kg/litre
Storage temperature	moderate
Effect of humidity	same as cement
Applic. temperature	not below 7°C
Physiological effects	same as cement
Toxicity	non-toxic

TEST REPORTS

Test reports are available upon request.

APPLICATION DIRECTIONS

Substrate Condition

Surfaces to which Emaco Nanocrete FC mixtures are to be applied, should be clean, sound and free of dust and loose particles.

Cement laitance, oil, grease, mould release oil or curing compound must be removed from concrete surfaces by using wire brush, bush hammer, scabbler, gritblasting or other means. Ensure that steel rebars are also clean from grease, oil or rust. When repairing spalled or deteriorated concrete, ensure that the concrete has been cut back to sound material.

Steel surfaces should be degreased with a suitable solvent or treated by gritblasting. In many cases where corrosion is absent, wire brushing to a clean bright surface is sufficient.

All absorbent surfaces to be treated with Emaco Nanocrete FC mortars must be thoroughly dampened to saturate all pores. During application, the temperature of the substrate should not be below 7°C.

To avoid too high surface temperatures it is advised to shade areas for the period of application.

Grooves more than 3mm deep should be prefilled with Emaco Nanocrete R2.

Mixing

Pour water into a suitable pail and add Emaco Nanocrete FC whilst mixing continuously until a homogeneous, lump-free mix is obtained.

The amount of water to be added is highly dependent on ambient temperature and relative humidity. In hot and dry climates, slightly higher amounts of water may be necessary, the contrary in cold and humid climates.

Use a low speed stirrer with a suitable mixing paddle to entrap as little air as possible.

Do not mix Emaco Nanocrete FC with additional cement, sand or aggregate.

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Priming
Is not required.

Method of use
Apply the well-mixed **Emaco Nanocrete FC** without delay to the prepared damp surface with a spatula or trowel; thin layers may be applied with a brush. A minimum temperature of 7°C is essential. Layers up to a maximum of 3mm per coating can be applied.

If **Emaco Nanocrete FC** is used as an adhesive, either spot or full surface bonding can be used. Bring the material being bonded into the correct position and press down firmly.

Depending on the finish desired, treat the surface of **Emaco Nanocrete FC** after it starts to set with a foam or sponge trowel.

Tools:

Mixing	:	low speed drill
Applic.	:	spatula, trowel or brush
Finish	:	wood or steel trowel to obtain very smooth surface, but avoiding a layer of laitance, it is best to smooth with foam or sponge trowel.

POT LIFE

The working time of **Emaco Nanocrete FC** depends on the temperature:-

at 20°C, about 50 minutes
at 30°C, about 25 minutes

If longer working time is required, a small amount of water can be added (maximum 2%) before the mix starts to set, e.g. by wetting the trowel with water.

ESTIMATING DATA

A 20kg bag of **Emaco Nanocrete FC** mixed with 4 litres of water yields 12 litres (0.012m³), therefore material requirement is 5kg/m² @ 3mm thickness.

CURING

All cementitious mortars and concrete have to be protected against too rapid surface evaporation immediately after placement. Freshly applied patches should therefore not be exposed to direct sunlight, wind or rain. Covering with wet hessian or plastic sheet for a period of 24 hours is recommended.

CLEANING

Emaco Nanocrete FC is a cementitious product. Tools should be cleaned with water before material hardens.

As **Emaco Nanocrete FC** is extremely sticky, it is advisable to wear rubber gloves when handling it.

SHELF LIFE

Emaco Nanocrete FC can be stored in tightly sealed original bags for 6 months, if kept dry and at moderate temperature.

PACKAGING

Emaco Nanocrete FC is available in 20kg bags.

PRECAUTIONS

Emaco Nanocrete FC is not toxic, but as with other products containing Portland cement it has an alkaline nature and thus can be irritating to skin and eyes. Wear simple dust masks and gloves when handling. Keep out of reach of children. Wash off splashes of mortar with clean water. If irritation persists, seek medical advice.

All BASF Construction Chemicals Australia & New Zealand data sheets are updated on a regular basis, it is the user's responsibility to obtain the most recent issue

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