



The Chemical Company

MasterEmaco® N 5100 (Formerly known as Emaco Nanocrete FC)

Cementitious polymer modified thin layer fairing mortar

DESCRIPTION

MasterEmaco N 5100 is a concrete-grey powder which when mixed with water yields a 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 USES

MasterEmaco N 5100 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.

MasterEmaco N 5100 is an ideal substrate for coatings and as a thin bed mortar for the placement of lightweight blocks, insulation boards and hollow masonry units (HMU).

MasterEmaco N 5100 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

- **Smooth final surface** - Good as a base layer for coatings and panels
- **Smooth silky texture** - Quick and easy to apply
- **Excellent bonding** - moves with the thermal movements of the structure
- **Very durable** - suitable for exposed use
- **Shrinkage compensated** - resists cracking
- **Feather edging possible** - thin layer patches and re-profiles
- **High early strength** - Water and weatherproof even in the first few hours

Well mixed **MasterEmaco N 5100** yields a plastic, thixotropic mortar that is easily applied on vertical surfaces or overhead. The very fine polymers have excellent adhesion to the substrate and improve the water retention thus preventing the formation of cracks.

After curing, **MasterEmaco N 5100** is waterproof and resistant to weather and frost.

PROPERTIES

Compressive strength @28 Days	40 MPa
Flexural strength @28 Days	7.0 MPa
E-Modulus @28 Days	12.0 GPa

Bond (to substrate) @28 Days	> 2.5 MPa
Co-efficient of thermal expansion (ASTM C531)	13 x 10 ⁻⁶ m/m/°C
Supply form	Grey powder
Water added per bag (20kg)	Up to 4 L
Density (mixed) Density (mixed)	2.0 kg/l
Storage temperature	Not below 7°C
VOC Content (SCAQMD: 304-91)	7g/L
Application temperature	10°C to 35°C
Working time @ 20°C @30°C	50 min 25 min

APPLICATION

Substrate Condition

Surfaces to which **MasterEmaco N 5100** 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, scabber, gritblasting or other means. For damage deeper than 3mm repair first with a **MasterEmaco** repair mortar like N201 CI or R401 CI. All absorbent surfaces to be treated with **MasterEmaco N 5100** mortars must be thoroughly dampened to saturate all pores. During application and the hardening of the **MasterEmaco N 5100**, 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. Application to substrates of more than 35°C is not recommended. Grooves more than 3mm deep should be prefilled with **MasterEmaco R201 CI**.

Mixing

Pour water into a suitable pail and add **MasterEmaco N 5100** 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 slow speed (300-600 rpm) stirrer with a helical mixing paddle to entrap as little air as possible.

Do not mix **MasterEmaco N 5100** with additional cement, sand or aggregate.

Priming Is not required.

Application



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Apply the well-mixed **MasterEmaco N 5100** without delay to the prepared damp surface with a spatula or trowel; thin layers may be applied with a brush. Layers up to a maximum of 3mm per coating can be applied.

Depending on the finish desired, treat the surface of **MasterEmaco N 5100** after it starts to set with a foam or sponge trowel.

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.

ESTIMATING DATA

A 20kg bag of **MasterEmaco N 5100** mixed with 4 litres of water yields 12 litres (0.012m³), therefore material requirement is 5kg/m² at 3mm thickness.

PACKAGING

MasterEmaco N 5100 is available in 20kg bags.

SHELF LIFE

MasterEmaco N 5100 can be stored in tightly sealed original bags for 6 months, if kept dry and undercover protected from rain

PRECAUTIONS

For the full health and safety hazard information and how to safely handle and use this product, please make sure that you obtain a copy of the BASF Material Safety Data Sheet (MSDS) from our office or our website.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this BASF publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by BASF either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not BASF, are responsible for carrying out procedures appropriate to a specific application.

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