

MasterEmaco[®] N 5200 CI (formerly known as Emaco Nanocrete R2)

Universal, fast-setting, polymer modified, fibre reinforced, light weight repair mortar with active corrosion inhibition

DESCRIPTION

MasterEmaco N 5200 CI is a universal, single component, polymer modified, fast setting, repair, re-profiling and levelling mortar containing active corrosion inhibition. **MasterEmaco N 5200 CI** contains special cements, graded sands, selected polymers and fibres to reduce shrinkage and improve physical and application properties. When mixed with water, it forms a mortar with an exceptionally wide range of applications.

MasterEmaco N 5200 CI can easily be hand or trowel applied in thicknesses from 3 up to 100 mm.

RECOMMENDED USES

- **MasterEmaco N 5200 CI** is used for the non-structural repair of concrete elements like balconies edges, building facades, parapet walls, precast panels, beam edges and stair nosings.
- **MasterEmaco N 5200 CI** can be applied as a smoothing or levelling coat at only 3 mm thick on large vertical and overhead areas to achieve a more aesthetic finish e.g. prior to painting.
- **MasterEmaco N 5200 CI** can be applied in environments where active corrosion inhibition is necessary.

FEATURES AND BENEFITS

- **Shrinkage compensation systems and fibre reinforcement** - Minimise crack tendency
- **Smooth, creamy, non-slump mortar; Superb application properties and feel on the trowel** - Easy to create profiles and corners without formwork
- **Excellent high build capacity** - Can be applied 80 - 100 mm in vertical applications or 70 – 80 mm overhead in one layer.
- **Multi-use**- Fairing coat and patch repair mortar in one with active corrosion inhibition
- **Fast setting** - Can be over-coated in only 4 hours
- **Good strength development** - Exceeding requirement of Class R2 of EN1504 part 3
- **Low modulus of elasticity** - Copes with thermal movement of structures
- **Low chromate (Cr[VI] < 2 ppm)** - Low risk of skin irritation
- **Chloride-free** - Does not add to chloride load of structure

PROPERTIES

Appearance	Grey powder
Layer thickness	Min. 3mm (fairing coating) Max. 100mm (vertical & horizontal), 80mm (overhead)
Density	Approx. 1.8 g/cm ³
Working time	30 – 45 minutes
Setting time - initial	45 – 75 minutes
- final	60 – 120 minutes
Temperature for application (substrate and material)	Between +5°C and +35°C

Compressive strength	
- after 1 day	≥15 MPa
- after 7 days	≥ 30 MPa
- after 28 days	≥ 40 MPa
AS 1478.2 Appendix A (Restrained)	
Adhesion (28 days) EN 1542	≥ 0.8 MPa
Adhesion after Freeze/Thaw (50 cycles with salt) EN 13687-1	≥ 0.8 MPa
Adhesion after Thunder/Shower (50 cycles) EN 13687-2	≥ 0.8 MPa
Adhesion after dry cycling (50 cycles) EN 13687-4	≥ 0.8 MPa
Cracking tendency (I) Coutinho type ring	No cracking after 180 days
Cracking tendency (II) DIN type V-channel	No cracking after 180 days
Capillary absorption EN 13057	≤ 0.5 Kg/m ² h ^{0.5}
Electrical resistance	28 days 3900 Ω.cm 56 days 6280 Ω.cm
VOC Content SCAQMD Test method 304-91	8g/L

Hardening times are measured at 21°C ± 2°C and 60% ± 10% relative humidity. Higher temperatures will reduce these times and lower temperatures will extend them. Technical data shown are statistical results and do not correspond to guaranteed minima. Tolerances are those described in appropriate performance standards



The Chemical Company

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APPLICATION

Surface preparation - Concrete must be fully cured, clean and sound to ensure good adhesion. All loose traces of concrete or mortar, dust, grease oil, etc. must be removed. Damaged or contaminated concrete should be removed to obtain a keyed surface. Non-impact/ vibrating cleaning methods, e.g. grit or high water pressure blasting are recommended. Aggregate should be clearly visible on the surface of the concrete structure after surface preparation. Cut the edges of the repair vertically to a minimum depth of 3 mm. If reinforcing steel is visible, clean to a minimum grade of SA 2 according to ISO 8501-1 / ISO 12944-4. For extra protection, or when the steel is left exposed before repair work is completed, apply **MasterEmaco N103 CI** active protection cement based primer.

Mixing - Only full bags are mixed. Damaged or opened sacks should not be used. Mix **MasterEmaco N 5200 CI** with a helical paddle attached to a slow speed (300-600 rpm) mixer or in a forced action pan mixer for 3 minutes until a lump free, plastic consistency is achieved. Only use clean water. Mixing water needed: 3.5 to 4.0 litres per 20kg bag depending upon consistency required. Allow the mortar to rest for 2 - 3 minutes and then remix briefly, adjusting the consistency as required. NB: Never exceed the maximum water demand.

Priming - The prepared substrate should be pre-soaked, preferably for 24 hours, but at least 2 hours before applying **MasterEmaco N 5200 CI**. The surface must be saturated surface dry, but without standing water. For improved build thicknesses or when working on large areas, apply bond or contact layer of the **MasterEmaco N 5200 CI** mortar. Alternatively a bonding coat of **MasterEmaco N103 CI** can be applied.

Mortar application - The minimum temperatures must be maintained during application and for at least 12 hours thereafter for optimum curing of the product. The surface must be mat-damp, but without standing water.

MasterEmaco N 5200 CI can be hand or trowel applied. Apply mixed product directly to the prepared damp substrate, or wet on wet onto the primed surface. A thin scrape coat or contact layer before building up to the required thickness, wet on wet, will improve the wet adhesion and cohesion of the mortar. Apply to the desired layer thickness of 3 to max. 100 mm. Smoothing with a trowel or finishing by float or sponge can be done as soon as the mortar has begun to stiffen, typically after approximately 45 - 60 minutes at 20°C. In these environmental conditions, **MasterEmaco N 5200 CI** can be over-coated, after approximately 4 hours, with **Masterseal®** as required. NB: At lower temperatures and/or higher humidity these times will be extended

ESTIMATING DATA

One 20kg bag will yield approximately 13 litres of mortar.

PACKAGING

MasterEmaco N 5200 CI is available in 20kg bags..

SHELF LIFE

Store in cool and dry warehouse conditions. Shelf life in these conditions is 12 months in unopened original bags.

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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