

MasterEmaco P 5000 AP

Formerly: Emaco Nanocrete AP

Single component, cement based, multi-use, bonding and active protective primer

DESCRIPTION

MasterEmaco P 5000 AP is a single component, polymer modified, cement based bonding and active protective primer used in concrete repair works.

MasterEmaco P 5000 AP reinstates a high pH environment and provides active corrosion inhibition to protect reinforcement steel. It can also be used as an adhesive bonding slurry for subsequent repair mortars.

When mixed with water, it forms a slurry that can be applied by brush to the clean exposed reinforcement, or directly on the dampened, prepared concrete substrate when used as a bonding coat.

FIELD OF APPLICATION

MasterEmaco P 5000 AP is used for the protection of reinforcement steel:

- When steel is visible and the available depth of cover is less than 10 mm.
- When concrete is contaminated with chlorides.
- In aggressive environments when extra protection is specified.
- With MasterEmaco N 5200 repairs when steel is visible.
- When the timing at the jobsite does not allow for the repair mortars to be applied immediately after cleaning the steel.

MasterEmaco P 5000 AP can also be used to aid bond and application properties of hand applied repair mortars in extreme thicknesses and conditions.

FEATURES AND BENEFITS

- Meets all major national and international norms for reinforcement priming in concrete repair systems.
- Excellent rust inhibiting properties as it reinstates a high pH environment.
- Provides active corrosion inhibition to further protect the reinforcement bars.
- Polymer modified for additional adhesive bond to the steel bars.



- MasterEmaco P 5000 AP does not affect the pull out strength of reinforcement steel.
- Perfect compatibility with steel rebars and concrete or repair mortars.
- Fast curing to save time and money.
- Simply mixed with water.
- Multi-use: can also be used as bonding slurry to improve bond and application thicknesses of MasterEmaco repair mortars on prepared concrete surfaces.
- Light grey/off white colour for easy site control of reinforcement coverage.
- Supplied in re-usable air-tight packaging.

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APPLICATION METHOD

(a) Surface Preparation

All corrosion and its by-products (loose rust particles, chippings) on the steel reinforcement must be removed from the full circumference of exposed steel reinforcement to be coated. The preparation should meet the requirements of ISO 8501-1 / ISO 12944-4 class SA2.

When MasterEmaco P 5000 AP is used as a bond coat on concrete, the surface must be completely clean and structurally sound. Remove deteriorated or contaminated concrete or mortar, e.g. by grit or high pressure water blasting. Saturate the concrete surface with water but remove excess of water before application with compressed air or rags.

(b) Mixing

Pour the minimum amount of clean, uncontaminated water into a pure vessel.

Mixing water ratio varies 0.19 to 0.20 liters per kg of powder, depending upon consistency required. Add the MasterEmaco P 5000 AP powder slowly and mix by hand or with a suitable paddle attached to a powerful, slow speed electric drill (max 400 rpm) until a smooth, thick consistency is achieved. Allow the MasterEmaco P 5000 AP mix to stand for 5 minutes so that full saturation of re-dispersible polymer can take place. Re-mix briefly before use, until a lump free consistency.

Note: Do not re-temper the mortar by adding extra water. Add water if necessary but never exceed the maximum water demand!

(c) Application

Do not apply MasterEmaco P 5000 AP when the temperature is below 5°C or above 35°C, or expected to fall below 5°C in the next 24 hours.

Do not apply MasterEmaco P 5000 AP to frozen or frost covered surfaces!

Apply the mixed material in an even layer at least 1 mm thick to the full circumference of the prepared

reinforcement using a soft paint brush. When the first coat has hardened sufficiently, (after approx. 30-90 minutes) apply a second coat also 1 mm thick. A film thickness of approx. 2 mm should be build up in two coats. It is important that this second layer MasterEmaco P 5000 AP has sufficiently hardened (depending upon application), before the repair mortar is applied. Repair mortars can be applied by hand after approximately 2 hours. For subsequent spray-application of repair mortars the priming coat must be left to dry for minimum 8 hours (at 20°C).

MasterEmaco P 5000 AP can be applied as a bonding slurry on concrete substrates. 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. The prepared substrate should be pre-soaked, preferably for 24 hours, but at least 2 hours before applying MasterEmaco P 5000 AP. Fresh primer should be applied on to the pre-soaked, damp surface by using a suitable brush. Typical application rates are 2-3 kg per m². Apply the repair mortar wet-in-wet onto a bonding coat of MasterEmaco P 5000 AP. Never allow the slurry bond coat to dry out!

COVERAGE

Approx. 1.6 kg powder is needed to prepare 1 liter of fresh mortar, which can cover 1m² of area in 1mm thickness.

FINISHING AND CLEANING

Tools and mixer must be cleaned immediately after use with water. Cured material can only be removed mechanically.

CURING

Curing times are dependent on the environmental conditions. Protect from rainfall until finally set.

WORKING TIME

90 to 120 minutes at 20 °C ambient and substrate temperature.

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PACKAGING

MasterEmaco P 5000 AP is available in 4 kg and 15 kg re-sealable plastic pails.

STORAGE

Store at ambient temperatures, out of direct sunlight, in cool, dry warehouse conditions and clear of the ground on pallets protected from rainfall prior to application.

SHELF LIFE

12 months if stored at above mentioned storage conditions in unopened original pails.

WATCH POINTS

- Do not apply MasterEmaco P 5000 AP at temperatures below +5°C nor above +35°C.
- Do not add cement, sand or other substances that could affect the properties of MasterEmaco P 5000 AP.

- Never add water or fresh mortar to a mortar mix, which has already begun to set.
- Keep the mixing water ratio between the recommended limits.

HANDLING AND TRANSPORT

Usual preventive measures for the handling of chemical products should be observed when using this product, for example do not eat, smoke or drink while working and wash hands when taking a break or when the job is completed.

Specific safety information referring the handling and transport of this product can be found in the Material Safety Data Sheet. For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

Disposal of product and its container should be carried out according to the local legislation in force. Responsibility for this lies with the final owner of the product.

Product Data			
Property	Standard	Data	Unit
Chemical Base	-	Cement	-
Colour	-	Grey	-
Layer Thickness (total thickness in two layers)	-	2	mm
Fresh Mortar Density (mixed with 0.19l/kg water)	-	Approx. 1.90	g/cm ³
Mixing Water (per kg powder)	-	ca. 0.19 – 0.20	l
Working Time at 20 °C	-	90 to 120	Minute
Pull out strength of coated rebar	Comparison vs. uncoated	≥ 80	%
Application Temperature (ambient and substrate)	-	+5 - +35	°C
Corrosion Protection	EN 15183	Pass	-

Note: 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.



We create chemistry

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Disclaimer:

In view of widely varying site conditions and fields of application of our products, this technical data sheet is meant to provide general application guidelines only. This information is based on our present knowledge and experience. The customer is not released from the obligation to conduct careful testing of suitability and possible application for the intended use. The customer is obliged to contact the technical help-line for fields of application not expressly stated in the technical data sheet under "Fields of Application". Use of the product beyond the fields of application as stated in the technical data sheet without previous consultation with BASF and possible resulting damages are in the sole responsibility of the customer.

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