EPO CEMENT

Polymer Modified Cement Based Ready Mortar for Adhering and Steel Protection

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DESCRIPTION

EPO CEMENT is a cementitious polymer modified single component adhesion mortar, based on a blend of Portland cements, graded silica sands, water reducing agents and compatible water resistant polymers. When mixed with water it forms slurry that can be applied by brush or spray to the clean exposed reinforcements or directly on the damped/prepared concrete surface when used as bonding coat.

USES

EPO CEMENT is designed for to use as adhesion mortar to old and new concrete and application to minor imperfections in concrete and masonry surfaces.

EPO CEMENT recommended in following situations:

- Adhesion mortar for old and new concrete bonding.
- As high corrosion resistance mortar to prevent reinforcement steel bar corrosion
- As a lining to the repaired mortars
- Filling pinholes, honeycombs in precast units prior to over coating
- Suitable to use in marine structures

ADVANTAGES

Easy to use: can be brush or spray application with long Workability.

Constant quality: Factory controlled pre-packed material eliminated site batching variations.

Adhesion: Excellent Adhesion to sound concrete substrates and steel.

Chloride free: Excellent strength development without the use of chloride.

Water resistance: Water and weather resistant.

PRODUCT DATA

Form	Powder
Color	Grey
Packing	25 Kg Kraft bag
Layer Thickness	Up to 2 mm
Mixing Water	5.5 Ltr/25Kg
Consumption	1.7 Kg/m^2 for 1 mm thickness
Storage	12 months, without opening the packing

TECHNICAL SPECIFICATION

Test Name	Standard	Average Result
Density	EN 1504:2005	2.10 ± 0.10 Kg/Ltr
Compressive Strength 28 days	EN 1504:2006	> 50 N/mm^2
Flexural Strength 28 days	EN 1504:2005	> 10 MPa
Tensile Adhesion Strength 28 days	EN1504:2005	> 1.2 N/mm^2
Workability @ 25^{0}C	EN1504:2005	100±15 minutes
Application Temperature	EN1504:2005	+5^{0}C - 35^{0}C

INSTRUCTION FOR USE

PREPARATION

Clean the surface and remove any dust, unsound material, plaster, oil, paint, grease, corrosion deposit or algae. Roughen the surface to remove any laitance and expose the fine aggregates by light scrabbling, grit-blasting or high pressure water blasting.

The cleaned areas should be blown cleaned with oil free compressed air before continuing. All prepared areas should be thoroughly soaked with clean water immediately prior to the application of **EPO CEMENT**. Any residual surface water should be removed prior to commencement.

Ver 01/20

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ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

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MIXING-SMALL QUANTITIES

Care should be taken to ensure the **EPO CEMENT** is thoroughly mixed. Small quantities (up to 5Kg) can be mixed using a suitable mixing drum or bucket. Greater quantities should be mixed using a forced-action mixer. Mixing in suitably sized drum using an approved spiral paddle attached to an approved slow speed (400/500 rpm) heavy-duty drill is acceptable.

If mixing small quantities by hand, **EPO CEMENT** should be premeasured by weight. Take 4 Part (by weight) of **EPO CEMENT** powder to one Part (by weight) of potable water, this should be mixed vigorously until fully homogeneous.

MIXING-LARGE VOLUMES

For larger volumes, place 5.50 ± 0.5 Liters of cool potable water into the mixer, and with the machine operation, add one full 25 Kg bag of **EPO CEMENT** and mix continuously for 3 to 5 minutes until fully homogenous.

Water addition may vary slightly according to both the ambient temperature and desired consistency of the mix, but it should not observe any bleeding or segregation.

For additional anti-dusting, or enhance the bonding performance properties, add 1 Liters of **EPO LATEX SBR** to the gauging water until the desired consistency is achieved.

Note: In all cases **EPO CEMENT** must be added to the water and when using SBR water/powder ratio to be adjusted to get desired consistency.

APPLICATION

Apply the mixes **EPO CEMENT** to the prepared substrate in two layers, up to 1mm thickness/coat, by suitable brush or spray. It should be applied with the minimum of working and be allowed to partly set before finally trowelling into a good finish.

Do not proceed with the application when rainfall is imminent unless in a sheltered or protected situation.

As bonding mortar: Work the mixed material well into the prepared and pre-soaked, damp surface by using a suitable brush. Typical application rates are 1.5 to 2.0 Kg /m²/coat. Apply the fresh repair mortar/concrete wet in wet within 60±15 minutes. Never allow the slurry bond coat to dry out.

As a reinforcement primer: Apply the mixed material in an even layer at least 1mm thick (approx. 1.7 Kg/m²) to the full circumference of the prepared reinforcement using a soft brush. When the first coat has hardened sufficiently, (approx. 90-120minutes) apply a second coat also 1mm thick. It is important that this second layer has sufficiently hardened before the repair mortar is applied. When applying the repair mortar by hand, this can be done after approximately 2 to 3 hours. However, when spraying a repair mortar the priming coat must be left to dry completely (min. 8 hours @25°C).

PACKAGING

EPO CEMENT is available in 25 Kg packs.

YIELD COVERAGE

25 Kg gives a yield of Approx.12 Liters at 22% water. One 25Kg bag covers 15 square meters at 1 mm thickness.

PRECAUTIONS

Cleaning: All equipment must be cleaned with water immediately after use. Mixes containing this product must not be emptied into drainage system.

Protection: All work must be protected from rain and frost until fully hardened.

Storage: Shelf life is 12 months when stored in dry conditions at moderate temperature and humidity.

Fire resistance: The product is not flammable.

HEALTH AND SAFETY

The product is non-toxic but mildly alkaline. Gloves should be worn during application. Splashes to the skin or eyes should be removed with clean water. In the event of prolonged irritation, seek medical advice.

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