

EPO CEMENT 012

Fiber Reinforced Cementitious Concrete Structural Repair Overhead Mortar



DESCRIPTION

EPO CEMENT 012 is supplied as a ready to use fibre reinforced cementitious dry powder requiring only the addition of water to produce cohesive easily applied mortar. The product is a careful blend of Portland cements, graded silica sands, shrinkage compensating agents silica fume, water reducing agents and compatible water resistant polymers. The product is designed to give good adhesion and cohesion in, the plastic state and low water requirement resulting in a non-shrink low porosity mortar with high compressive strength and durability.

TYPICAL APPLICATIONS

EPO CEMENT 012 is recommended for structural reinstatement of damaged concrete for beams and columns in inland and marine environments, and as a general purpose repair mortar for concrete floors, overhead, wall and highly trafficked areas. Suitable for application in the range of 10 mm to 40 mm in one step and more thickness in multi steps.

ADVANTAGES

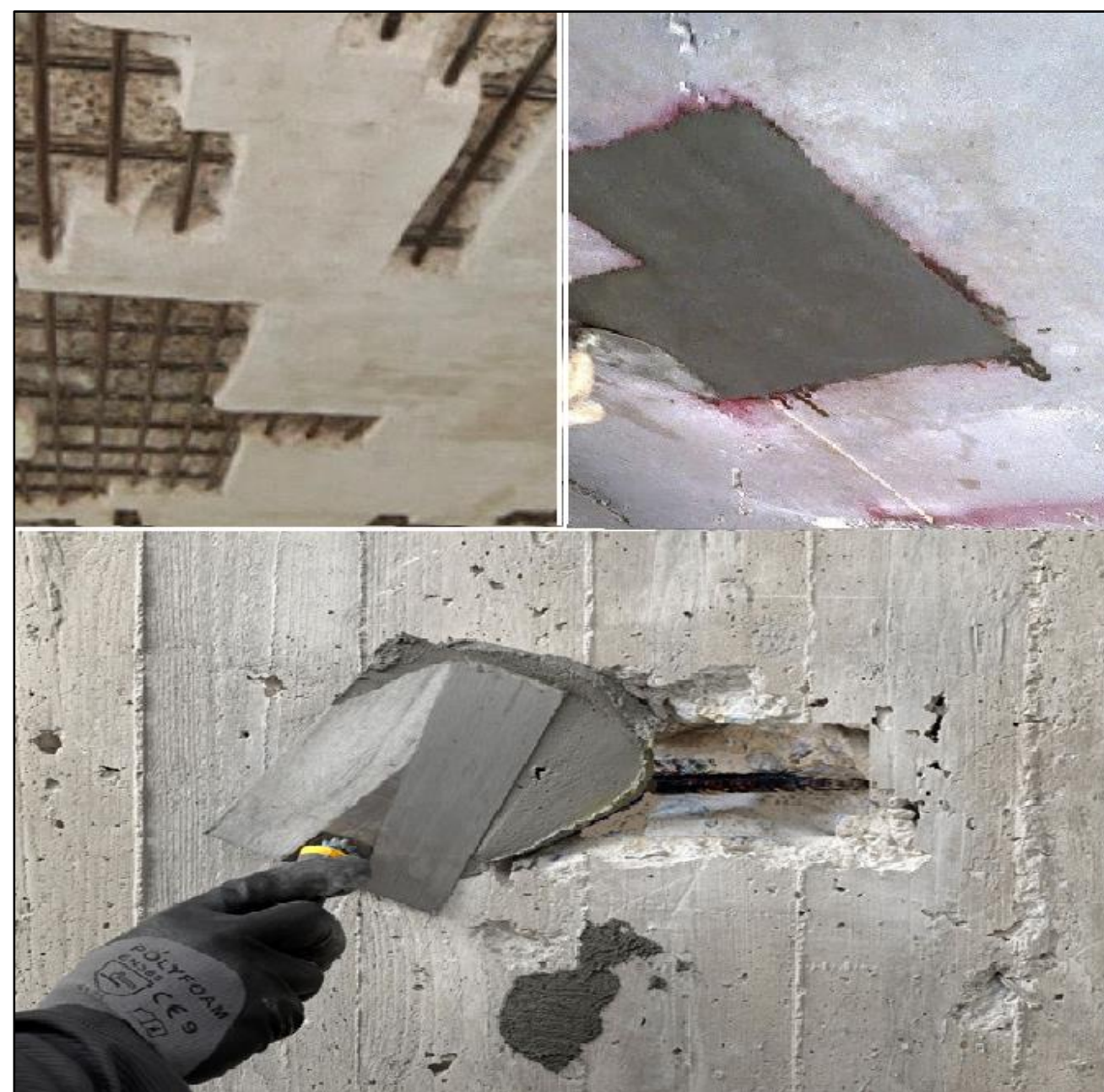
- One component, pre-bagged factory controlled material eliminates site batching variations.
- Recommended for overhead, vertical and horizontal application.
- Shrinkage compensated, suitable for internal and external application.
- Easily trowel applied. Workability retained for approximately 30-45 minutes.
- Fiber reinforced polymer modification provides extremely low permeability to water. Good resistance to carbonation and chloride penetration.
- Excellent to sound concrete substrates and steel.
- No metallic iron to cause staining or deterioration to rust expansion.
- Good strength development without the use of chlorides.

PRODUCT DATA

Form	Powder
Color	Grey
Packing	25 Kg Kraft Bag
Consumption	2.0 Kg/m ² for 1 mm thickness
Shelf life	12 months in dry/enclosed medium

TECHNICAL SPECIFICATION

Test Name	Standard	Average Result
Density @25°C	DIN 18555 PART-2	2.30 ± 0.1
Grout Consistency (water liter/Grout KG)	---	3 Ltr /25 Kg
Compressive Strength 28 days	ASTM C 109	45 MPa
Pull-off Adhesion Strength 28 days	ASTM D 4541	1.20 N/mm ²
Flexural Strength 7 days	ASTM C 348	19 MPa
Setting Time (min) Initial Setting Time Final Setting Time	ASTM C 308	100 min 240 min
Linear Shrinkage	ASTM C 531	0.864 mm/m
Water Absorption	ASTM C 413	1.21%
Water Vapour Permeability	ASTM E 96	0.35
Crack bridging capability	ASTM C 836	85 mm
Chloride content	ASTM C 1218	0.0002



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APPLICATION PROCEDURE

CONCRETE PREPARATION

Cut back concrete at edge of repair to minimum depth of 10mm. Do not feather edge. Use mechanical hand tools, grit blasting or water jetting.

STEELWORK

Corrosion products should be removed from all exposed steel using mechanical means, grit or water blasting.

STEEL PRIMER

Steelwork should be primed before new corrosion products form with a slurry coat of **EPO LATEX SBR** with neat cement or a zinc rich primer.

CONCRETE PRIMER

The concrete should be first soaked with water to reduce the absorbency. A slurry priming coat of **EPO LATEX SBR** with neat cement should then be applied to the concrete.

MIXING

Place 3.0±0.5 liters water in mixer to give mortar consistency. Add 25 Kg bag and stir with slow speed drill and paddle or preferably with a mechanical mixer. Mix for 3 to 5 minutes after all powder has been added to obtain a smooth cohesive mortar.

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

Note: In all cases **EPO CEMENT 012** must be added to the water and when using SBR water/powder ratio to be adjusted.

PLACING

Place the mortar whilst the primer is tacky by trowel or preferably by hand ensuring that it is well consolidated behind any reinforcing steel. The minimum application thickness should be 10mm. The maximum practical application thickness vertically, overhead is 40mm and can go more thickness in multistep with formwork.

CURING

Curing is not generally required. However, under extreme conditions-high temperature and drying winds-it may be prudent to use **EPO CURE** range of product as a curing agent.

PRECAUTIONS

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

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

Fire resistance: **EPO CEMENT 012** is not flammable.

HEALTH AND SAFETY

EPO CEMENT 012 is non-toxic but is 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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