

# EPO CEMENT 020

Polymer Modified Cementitious Repair and Finish Mortar, Fine and Coarse Grades



## DESCRIPTION

**EPO CEMENT 020** is a cementitious polymer modified single component mortar system, based on a blend of Portland cements, water reducing agents and compatible water resistant polymers. The product is designed to give good adhesion and cohesion in plastic states and low water requirement resulting in low porosity and long durability.

**EPO CEMENT 020** is available in two grades;

### FINE GRADE:

It is suitable for the application in the range of feather edge to 1mm

### COARSE GRADE:

It is suitable for application in the range of 1mm to 3mm and can be applied up to 6mm in multiple steps.

## USES

**EPO CEMENT 020** is designed for application to minor imperfections in concrete and masonry surfaces. It can be used in the following situations:

- Used as fair faced concrete after patch repairs to walls
- Filling pinholes, honeycombs in precast units prior to over coating
- General re-profiling over large area
- Suitable to use in marine structures

## ADVANTAGES

**Easy to use:** can be brush, sponge or trowel applied. Workability retained for approximately 40 minutes.

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

**Adhesion:** Excellent 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
Colour	White/Grey
Density	1.90 ± 0.20 Kg/Ltr
Chloride content (ASTM C1218)	< 0.01
Packing	20 Kg Kraft bag
Layer Thickness	Fine grade: up to 1mm
	Coarse grade: 1mm to 3mm
Consumption	1.5 Kg/M <sup>2</sup> for 1mm thickness
Storage	12 months, without opening the packing

## TECHNICAL SPECIFICATION-FINE GRADE

Test Name	Standard	Average Result
<b>Grout Consistency (water Ltr/Grout Kg)</b>	-	7.0 Ltr/20Kg
<b>Bond Strength</b>	ASTM C321	0.98 N/mm <sup>2</sup>
<b>Compressive Strength</b> 7 days 28 days	ASTM C109	> 15 MPa > 20 MPa
<b>Abrasion Resistance</b>	EN 12808 - 2	345.8mm <sup>3</sup>
<b>Flexural Strength</b> 7 days	ASTM C348	> 4 MPa
<b>Setting Time (min)</b> Initial Setting Time Final Setting Time	ASTM C191 ASTM C305	306 min 350 min
<b>Linear Expansion</b>	ASTM C531	6.5x10-6 /°C
<b>Water Absorption</b>	ASTM C413	2.8%
<b>Water Vapor Permeability</b>	-	0.15mm <sup>3</sup>

## TECHNICAL SPECIFICATION - COARSE GRADE

Test Name	Standard	Average Result
<b>Grout Consistency (water Ltr/Grout Kg)</b>	-	5.0 Ltr/20Kg
<b>Bond Strength</b>	ASTM C321	1.3 N/mm <sup>2</sup>
<b>Compressive Strength</b> 7 days 28 days	ASTM C109	> 20 MPa > 25 MPa
<b>Abrasion Resistance</b>	EN 12808 - 2	394 mm <sup>3</sup>
<b>Flexural Strength</b> 7 days	ASTM C348	> 10 MPa
<b>Setting Time (min)</b> Initial Setting Time Final Setting Time	ASTM C191 ASTM C305	175 min 327 min
<b>Linear Shrinkage</b>	ASTM C596	1.83 mm/m
<b>Water Absorption</b>	ASTM C413	5.6%
<b>Water vapour Transmission</b>	ASTM E96	0.29 g/m <sup>2</sup> /24hours



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## INSTRUCTION FOR USE

### SURFACE PREPARATION

Clean the surface and remove any dust, unsound material, plaster, oil, paint, grease, corrosion deposit or algae. Remove any laitance and expose the fine aggregates by light scrubbing or grit-blasting.

Oil and grease deposit should be removed by steam cleaning, detergent scrubbing or the use of proprietary degreaser. The effectiveness of decontamination should then be assessed by pull-off test.

The cleaned areas should be blown clean 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 020**. Any residual surface water should be removed prior to commencement.

### MIXING-FINE GRADE

Place 7±0.5 Liters of cool potable water into the mixer, and with the machine operation, add one full 20Kg bag of **EPO CEMENT 020** and mix continuously for 3 to 5 minutes until material becomes fully homogenous.

### MIXING-COARSE GRADE

Place 5±0.5 Liters of cool potable water into the mixer, and with the machine operation, add one full 20Kg bag of **EPO CEMENT 020** and mix continuously for 3 to 5 minutes until material becomes fully homogenous.

Water addition may vary slightly according to both the ambient temperature and desired consistency of the mix, but it should not exceed the suggested limits.

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 020** must be added to the water and when using SBR water/powder ratio to be adjusted.

### APPLICATION

Apply the mixed **EPO CEMENT 020** to the prepared substrate, up to desired thickness, by steel trowel. It should be applied with the minimum of working and be allowed to partly set before finally trowelling into a smooth finish. Thickness up to 6 mm can be achieved by multiple steps of application.

If a very smooth finish is required, a small amount of water may be flicked on to the surface of the **EPO CEMENT 020** with a paint brush prior to final trowelling.

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

### FINISHING

**EPO CEMENT 020** is finished by striking off with a straight edge and closing with a steel or plastic float. Note that water can be drawn to the surface if "overworking" with the float occurs, and an unsightly finish may result.

Damp sponges or plastic floats may be used to achieve a desired surface structure, but care should again be taken not to overwork the surface.



### 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.

**EPO CURE** range of product does not require any mechanical removal prior to over coating.

### YIELD COVERAGE

#### FINE GRADE:

20Kg gives a yield of Approx.14 Liters at 35% water

One 20Kg bag covers 14 square meters at 1.0 mm thickness.

#### COARSE GRADE:

20Kg gives a yield of Approx.13 Liters at 25% water

One 20Kg bag covers 13 square meters at 1.0 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.

**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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