



# KEM MORTAR EP 3

## High Build Epoxy Resin MORTAR

Ref: CR/MR-V1-0112

### Description

KEM MORTAR EP 3 is a three component solvent free epoxy resin based MORTAR designed for quick and high builds repairs to concrete, particularly in vertical or overhead situations. It is light weight which means thick section can be built without adding more load to original structure.

### Uses

- For quick and permanent repairs to concrete structures, particularly in overhead and vertical situations where thick sections are required to be built and resistance to water and aggressive chemicals is essential.
- Repairs to concrete columns, lintels and roof-beam faces, to provide a dense impermeable cover for protecting the embedded reinforcing steel.

### Advantages

- Early Strength development
- Good Resistance to a wide range of acids, alkalies and industrial chemicals.
- Ability to cure under damp conditions.
- Light weight allows placing of thick repair section in overhead and vertical situations.

### Typical Properties

**Pot Life** : 80 minutes at 25<sup>0</sup> C, 50 minutes at 35<sup>0</sup> C

**Full Cure** : 7 days at 25<sup>0</sup> C, the curing time will be increased, in temperature below 20<sup>0</sup> C

Minimum Application Temperature: 5<sup>0</sup> C

**Density** : Typically 1060 kg/M<sup>3</sup>

Performance of KEM MORTAR EP 3 blocks continually immersed at 20<sup>0</sup> C

**Diesel fuel / petrol** : Excellent

**Hydrocarbons** : Very good

**Sodium hydroxide 50%** : Excellent

**Phosphoric acid 50%** : Very good

**Sulphuric acid 10%** : Very good

**Hydrochloric acid 25%** : Excellent

**Citric Acid 10%** : Excellent

For other Chemicals please contact Chembond technical department.

### Mechanical properties:

Tests	KEM MORTAR EP 3 N/mm <sup>2</sup>
Compressive Strength	32
Flexural Strength	15
Tensile Strength	7.5
Water Absorption	<0.4%

### Standards

ASTM-C 881 - Type I & Grade 3, Class B&C Passes  
ASTM-C 883 & ASTM-C 884.

ASTM C-579 - Compressive strength.

ASTM C-580 - Flexural Strength.

ASTM C-307- Tensile Strength .

ASTM D-570- Water Absorption.

### Direction for use

**Surface Preparation:** All grease, oil, chemical contamination, dust, laitance and loose concrete must be removed by scabbling or suitable non impact mechanical tools to provide a sound substrate. Metal surface should be cleaned followed by grit blasting to BS 4232: Second Quality or SA2.5 (SIS 05 59 00).

**Priming:** Prior to the application of KEM MORTAR EP 3, a primer must be used. The use of KEM Seal EP 110 is recommended. Refer respective product data sheet for more details.

**Mixing:** The total base and hardener components should be thoroughly mixed and then emptied into the mixer or mixing vessel. Add the filler part slowly with the mixer running and continue for 2 to 4 minutes until homogeneous mix is obtained. The mixed material should be used before it sets.



Application should be applied to the primed surface, with wood float, pressing the MORTAR firmly on to the primer to ensure good adhesion. In areas where application by trowel is difficult, the MORTAR may be applied and compacted by gloved hands, ensuring that each layer is properly kneaded into previous layers and that no weak interface is produced. Thickness up to 40 - 60mm per layer may be applied. Where large areas are being repaired, a chequerboard application technique may be used. The maximum thickness for smaller repairs may increase to 70 mm where additional support is available from reinforcing bars and concrete shoulders. If subsequent layers need to be applied, they should follow after 8 and 24 hour later at 25° C or after 6 and 8 hours at 35°C. The surface of the first layer should be roughened to provide a mechanical key for subsequent applications. Priming is essential between layers. The compacted repair should be finished with a wood steel float to an acceptable finish.

### Packaging

KEM MORTAR EP 3 is available 10.5kg packs which yield 9.4 liters giving a theoretical coverage of 2.0 m<sup>2</sup> at 5mm thickness.

### Storage and Shelf life

Store in dry conditions up to 30°C.

Shelf life - is 12 months.

### Technical Service

Chembond has established itself in various fields on the basis of its dependable technical service. For this purpose, we maintain a well equipped laboratory for research & quality assurance of all products. Our experienced personnel are always on call and would always be available for product demonstrations and product performance monitoring.

### Safety precautions

**Cleaning:** Spillages should be absorbed with sand or earth etc. and disposed in accordance with local

regulations. Clean tools and equipment with water/solvents immediately after use.

If mixed resin comes in contact with skin, it must be removed before hardening with a resin removing cream, followed by washing with soap and plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately. Do not induce vomiting.

It should not come in contact with skin and eyes or be swallowed. Avoid prolonged inhalation of vapours. Some people are sensitive to epoxy resins, therefore, protective gloves, goggles and barrier cream should be used. Ensure adequate ventilation and if working in enclosed areas, suitable breathing apparatus must be used. If mixed resin comes in contact with skin, it must be removed before hardening with a resin removing cream, followed by washing with soap and plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately. Do not induce vomiting.

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