

Product Data Sheet
Edition 07.2008
Identification No. RC - 1



KEMREPAIR

High strength polymer modified non-shrink repair mortar

Description

KEMREPAIR is a high strength patching cementitious material especially designed for repairing of vertical and horizontal surfaces of concrete and masonry.

Where to use

- KEMREPAIR is used for general repair purposes of damaged or spalled concrete and for the protection of steel reinforcement rods against corrosion.
- KEMREPAIR is used for the restoration of concrete structures permanently subjected to severe weathering conditions.
- KEMREPAIR is used as a sealer and bonding mortar between two layers of concrete to solve the problem of cold joints.

Advantages

- Easy to use.
- Excellent weathering resistance.
- Rust inhibiting properties since it does not contain calcium chloride.
- Excellent adhesion to concrete and steel.
- Breathable.
- Economic since it can be applied without the need of expensive form work.
- Water repellent.
- Non-shrink mortar.

Properties

Physical Properties:

Coefficient of thermal expansion		$9 \times 10^{-6} / ^\circ\text{C}$
Setting time	Initial	180 min.
	Final	250 min.
Density	Fresh wet	$2 \pm 0.2 \text{ gm/cm}^3$

Mechanical Properties:

After 28 days cured at 20° C and R.H. of 70 ± 5%

Compressive strength	N/mm ²	40
Flexural strength	N/mm ²	8-9
E- Modules	N/mm ²	24550
Adhesion strength to concrete	N/mm ²	2
Adhesion strength to plain bars	N/mm ²	5
Adhesion strength to deformed bars	N/mm ²	10

How to use

Surface preparation:

- Remove all damaged and contaminated concrete to reach the sound core.
- Remove additional concrete surrounding and along the reinforcement bars.
- Formation of clean-cut edges to avoid feathered edges.
- Thoroughly clean reinforcement bars to remove all rust, scale and surface contaminants. (Sand or abrasive blasting is advised.)
- If steel is heavily corroded that significant loss of section has occurred, add new steel. (Please consult a qualified engineer.)
- Clean and dampen the concrete surface with water, or use KEMBOND SBR as a bonding agent between the old and the new layer.

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**Mixing:**

Mix KEMREPAIR with clean water to a batter consistency.

Mixing ratio: 4 liters of water per sack 25kg.
Application

- Apply a slurry coat by brush over reinforcing rods and concrete.
- Slush mix under and between steel rods and make sure all cracks and voids are filled.
- Reinforcing rods should be completely surrounded by KEMREPAIR in order to avoid corrosion.
- Then mix KEMREPAIR to a thicker consistency and apply successive layers of 20-25 mm.
- Minimum layer thickness 10 mm.
- Scratch each layer before applying the next in order to improve the bonding.
- Each new layer should be applied within 1-2 hour.
- Remodel to the original profile.
- Use approved curing methods as (KEMCURE) or moist curing for at least 48 hrs.

Theoretical Coverage:

2 Kg/m²/1mm thick.

Packing:

25 kg. Sacks.

Storage:

KEMREPAIR has a shelf life of 6 months if maintained in dry storage conditions (unopened sacks).

Precautions

- Use only potable water.
- Do not add extra water above stated quantities.
- In case retarded drying out is required, apply a curing agent or cementitious paint immediately after application.
- KEMREPAIR should not be applied to substrates that is exposed to running water or which are permanently wet.
- Application should not be carried out when ambient temperature is below 5 °C.
- KEMREPAIR should not be applied in thickness less than 10 mm or width less than 55 mm.

Health and Safety

- Use gloves when handling dry powder.
- Do not breathe dust.

Additional Information

PROKEM provides the construction industry with a comprehensive range of construction chemicals and specialty products answering the queries of modern engineers for trouble free durable structure. PROKEM designs tailor made products should there be critical application that requires specific properties rather than our main range.

For our customers satisfaction, PROKEM extends technical services to include after sales support to assist users in a proper handling of our products.