

Product Data Sheet
Edition 07.2008
Identification No. RC - 4



KEMREPAIR HISTORICAL

High strength polymer modified non-shrink repair mortar for historical buildings and ancient monument

Description

KEMREPAIR HISTORICAL is a soft lime patching cementitious repair mortar specially designed for use on historical building and ancient monuments.

Where to use

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

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.
- Available in several colors.

Properties

Physical Properties:

Coefficient of thermal expansion		$8 \times 10^{-6} / ^\circ\text{C}$
Setting time	Initial	180 min.
	Final	250 min.
Density	Fresh wet	2.2 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	2.3
Adhesion strength to plain bars	N/mm ²	5
Adhesion strength to deformed bars	N/mm ²	10-10.5

How to use

Surface preparation:

- Remove all damaged and contaminated concrete to reach the sound core.
- Remove additional concrete surrounding and along the reinforcements.
- Formation of clean-cut edges to avoid feather 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.

Mixing: Mix KEMREPAIR HISTORICAL with clean water to a batter consistency. Mixing ratio: 4 to 5 liters per sack.

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**Application:**

- Apply a slurry coat by brush over reinforcing rods of concrete.
- Slush mix under rods and make sure all cracks and voids are filled.
- Reinforcing rods should be completely surrounded by KEMREPAIR HISTORICAL in order to avoid corrosion.
- Then mix KEMREPAIR HISTORICAL to a thicker consistency and apply successive layers of 20-25 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 hours.

Theoretical Coverage:

2 Kg/ m²/ mm thick. .

Packaging:

25 kg. sacks.

Storage:

KEMREPAIR HISTORICAL has a shelf life of 12 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 HISTORICAL 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 HISTORICAL 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 customer's satisfaction, PROKEM extends technical services to include after sales support to assist users in a proper handling of our products.