

Product Data Sheet  
Edition 07.2008  
Identification No. RC - 2



## KEMREPAIR F

High strength fiber polymer modified non-shrink concrete repair mortar

### Description

**KEMREPAIR F** is a high strength patching cementitious material especially designed for repairing of vertical and horizontal surfaces of concrete and masonry, fortified with special alkali resistant fiber, that improve appreciably the impact, flexural & tensile strength.

### Where to use

- **KEMREPAIR F** is used for general repair purposes of damaged or spalled concrete and for the protection of steel reinforcement rods against corrosion.
- **KEMREPAIR F** is used for the restoration of concrete structures permanently subjected to severe weathering conditions.
- **KEMREPAIR F** 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.

### Properties

#### Physical Properties:

Coefficient of thermal expansion		$12 \times 10^{-6} / ^\circ\text{C}$
Setting time	Initial	180 min.
	Final	250 min.
Density	Fresh wet	$2.2 \text{ gm/cm}^3$

### Mechanical Properties:

After 28 days cured at  $20^\circ\text{C}$  and R.H. of 70  $\pm 5\%$

Compressive strength	$\text{N/mm}^2$	45
Flexural strength	$\text{N/mm}^2$	12
E- Modules	$\text{N/mm}^2$	20000
Adhesion strength to concrete	$\text{N/mm}^2$	3
Adhesion strength to plain bars	$\text{N/mm}^2$	5
Adhesion strength to deformed bars	$\text{N/mm}^2$	10.4

### 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 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, or use **KEMBOND SBR** as a bonding agent between the old and the new layer.

#### Mixing:

Mix **KEMREPAIR F** with clean water to a batter consistency.  
Mixing ratio: 4- 4.5 liters per 25 kg sack.

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**Application:**

- Apply a slurry coat by brush over reinforcing rods and concrete.
- Slush mix under and make sure all cracks and voids are filled.
- Reinforcing rods should be completely surrounded by KEMREPAIR F in order to avoid corrosion.
- Then mix KEMREPAIR F 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/m<sup>2</sup>/1mm thick.

**Packaging:**

25 kg. sacks.

**Storage:**

KEMREPAIR F 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 F 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 F 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.