

Kemrepair

High Strength Polymer Modified Non-Shrink Repair Mortar

Description	Kemrepair is a high strength, non-shrink, single component patching cementitious mortar especially designed for repairing of vertical and horizontal surfaces of concrete and masonry. Kemrepair is high flexural to compressive strength ratio, as well as excellent bonding characteristics , produces a mortar of superior patching and splicing capability.	
Where to use	• Kemrepair is used for general repair purposes of damaged or spelled 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 in balcony, columns and beams. • Kemrepair is used as a sealer and bonding mortar between two layers of concrete to solve the problem of cold joints.	
Advantages	• Kemrepair provides the following advantages: • Easy to use. • Excellent weathering resistance. • Rust inhibiting properties since it does not contain calcium chloride. • It forms part of the substrate and the repairs are structurally sound, with properties comparable or higher than concrete. • 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. • Low VOC, Eco friendly.	
Properties		
Mechanical Properties:	After 28 days cured at 20o C and R.H. of 70 ±5%	
Compressive Strength	35 - 40 N/mm ²	
Flexural Strength	8 - 9 N/mm ²	
E- Modules	24550 N/mm ²	
Adhesion strength to concrete	1.5 N/mm ²	
Adhesion strength to concrete (Shear Bond)	2 N/ mm ²	
Adhesion strength to plain bars	5 N/mm ²	
Adhesion strength to deformed bars	10 N/mm ²	
Pot life	60 - 80 minutes	
Physical Properties:		
Coefficient of thermal expansion	9 x 10-6/ °C	
Setting time	Initial: 180 min. Final: 250 min.	
Density	2 ±0.2 gm. /cm ³ Fresh wet	
VOC	12.13 gm. /l	LEED NC-2016, IEQC 4.2, LEM

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. • Rebar's can be primed with Kemprim ZRS for protection against corrosion.
Expansion Joints	Shall be installed in accordance with local building codes & never bridge an expansion, contraction, or construction joint.
Mixing	Mix Kemrepair with clean water to a batter consistency. Mixing ratio: 4 liters of water per sack 25 Kg.
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. • Curing: • On completion of the repairing operation, exposed areas which are not to be cut back should be thoroughly cured by means of water application, Kemcure curing membrane or wet hessian for at least 48 hours.
Cleaning	Kemrepair should be removed from tools and equipment immediately after use with clean water.
Theoretical coverage	2 Kg/m ² /1mm thick.
Packaging	25 kg Sacks.
Shelf life & Storage	Kemrepair has a shelf life of 12 months if maintained in dry storage conditions (unopened sacks)
Precaution	• 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	• Kemrepair is non-toxic if come in contact with skin. • Use gloves to avoid contact with skins. • If skin comes in contact, wash immediately with soap and water. • Do not use solvents. • Eye contamination must be immediately washed with water, then seek medical treatment. • Do not breath dust, Use a practical mask.
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 reserves the right to change the properties of its products. All orders are accepted subject to our current term of sale & delivery. Users must always refer to the most recent issue of the local product data sheet for the product concerned, copies of which will be supplied on request. PROKEM extends technical services to include after sales support to assist users in a proper handling of our products. Environmental Considerations Kemrepair is environmentally safe.