

Kemrepair UW

Underwater High Strength Polymer Modified Non-Shrink Concrete Repair Mortar

Description	Kemrepair UW is a high strength ,non-shrink , Single component patching cementitious mortar, the art of work technology designed specifically for underwater patch repair for vertical and horizontal surfaces of concrete, the material has been improved appreciably to stand high impact, flexural and tensile strength
Where to use	Kemrepair UW is used for general underwater repair purposes of damaged or spelled concrete, for the protection of steel reinforcement rods against corrosion, repairs honeycombs, cracks and fissures. Kemrepair UW is used for repairs permanently subjected to severe weathering conditions. • Underwater marine decks • Splash zones and offshore environments • Seawalls • Breakwaters
Advantages	Kemrepair UF provides the following advantages: • Resistance to washing out • Easy to use • Excellent weathering resistance • Rust inhibiting properties since it does not contain calcium chloride • Very good thixotropic without slump or the need for using form work • Excellent adhesion to concrete and steel • Non-shrink, non-toxic & non-flammable • High mechanical strengths • Can be used for filling voids or holes in floors • Reduces rate of carbon dioxide & chlorides
Properties	
Mechanical Properties:	After 28 days cured at 20 °C and R.H. of 70 ±5%
Compressive Strength	45 N/mm ²
Flexural Strength	9 N/mm ²
E- Modules	20000 N/mm ²
Adhesion strength to concrete	3 N/mm ²
Adhesion strength to plain bars	5 N/mm ²
Adhesion strength to deformed bars	10.4 N/mm ²
Pot life	40 minutes
Physical Properties:	
Coefficient of thermal expansion	12 x 10 ⁻⁶ / °C
Setting time	Initial: 180 minuets Final: 250 minuets
Density	2 ±0.2 gm. /cm ³ Fresh wet

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.)
Expansion Joints	Shall be installed in accordance with local building codes & never bridge an expansion, contraction, or construction joint
Mixing	Mix Kemrepair UW with clean water to a batter consistency Mixing ratio: 3.25 – 3.5 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 UW in order to avoid corrosion • Then mix Kemrepair UW 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
Cleaning	Kemrepair UW 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 UW 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 UW 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
Health and Safety	• Kemrepair UW 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