

TECHFIN STRUCTURAL REPAIR MORTAR

CEMENTITIOUS FIBRE REINFORCED POLYMER MODIFIED, THIXOTROPIC REPAIR MORTAR AND WATERPROOFER

DESCRIPTION

TECHFIN STRUCTURAL REPAIR MORTAR is a fibre reinforced, polymer modified cementitious mortar suitable for heavy duty repairs to concrete, aerated concrete and cementitious structures. When mixed it provides a thixotropic, high strength repair mortar. Acrylic polymer modified it exhibits excellent bond characteristics to structural steel reinforcement and concrete.

TECHFIN STRUCTURAL REPAIR MORTAR ensures that repairs to new and old structures are waterproof and further protects the concrete from deterioration by preventing penetration of chloride ions, sulphates, etc. Being cement based, the TECHFIN STRUCTURAL REPAIR MORTAR repair system protects embedded steel by creating a passive (alkaline) environment as well as ensuring thermal compatibility with the base concrete.

APPLICATIONS

- Repair of concrete pipes / precast concrete
- Repair of damaged structural concrete
- Used as a water-tight plaster / caulking mortar
- Truing up beams / columns
- Food processing and bottling plants
- Offshore structures and sewage works
- Marine environments exposed to constant contact with sea water
- Repairs to honeycombing
- Repairs to aerated concretes and mortars
- Wherever a highly durable repair topping or render is required to ensure maximum resistance to salt penetration, sulphates and chlorides.

ADVANTAGES

- Factory controlled – ready-to-use just add water
- Can be plastered to a feather edge or applied for mass mortar renovations up to 50mm in one application
- Thermal movement is similar to that of base concrete
- Non-Shrink
- Extremely versatile - can be used for repairs in both vertical and horizontal applications
- Highly resistant to abrasion and mechanical impact
- Excellent bond to base concrete or asphalt
- Vapour permeable

PACKAGING

TECHFIN STRUCTURAL REPAIR MORTAR is supplied in 25Kg polywoven bags.

TECHNICAL DETAILS

Compressive Strength (28 day): 35-40 MPa
Appearance: grey powder containing fibres
Pot-Life: 40-60 min depending on temperature
Yield: ± 12L once mixed
Density: ± 2.3
Coverage: ±1.2m² at 10mm
Water penetration: <5mm
Storage: 1 Year when stored under cover on pallets off from ground level

DIRECTIONS

CONCRETE REPAIR

It is generally accepted that concrete is best repaired with concrete or cement mortar (only when there are other over-riding factors are epoxy resin based materials substituted). To meet these requirements for a cementitious repair method use TECHFIN STRUCTURAL REPAIR MORTAR in conjunction with our SOLIDKOTE 110 Wet to Dry Epoxy Adhesive.

SURFACE PREPARATION

Where necessary cut back to expose sound concrete and reinforcing bars. Mechanically clean reinforcing steel to remove corrosion. Wash reinforcing steel with clean water (to remove soluble salt contamination) and allow to dry. Use hot water and powder detergent to remove grease and oil. Prime reinforcing with SOLIDKOTE METAL PRIMER and allow to dry for 3 - 4 hours.

PRIMING

Prime all clean and prepared surfaces with SOLIDKOTE 110 Wet to Dry Epoxy Adhesive. If inserting new reinforcing bars, coat same with SOLIDKOTE 110 Wet to Dry Epoxy Adhesive prior to proceeding with the repair.

REPAIR

Whilst primer is still wet - carefully apply and compact the TECHFIN STRUCTURAL REPAIR MORTAR mortar which can be applied from 5mm to 40mm dependent on repair size geometry. On larger flat areas, layers should not exceed 10mm in thickness, though several layers can be applied in quick succession, each layer being allowed to obtain initial set before the next is applied (usually between 20 - 40 minutes dependent on ambient temperature conditions). Finish off the final surface. Alternatively scratch the first coat after application, allow to dry overnight and then apply a second layer. Cure with water or wet hessian.

OTHER REPAIRS

Remove existing plaster to brick or concrete face and scarify where necessary to obtain a rough and sound surface. Wash down with water. Pre-saturate prepared surface and apply bonding slurry or equal parts cement, water and TECHFIN HI-DENSITY BONDING LIQUID to surface. Immediately apply TECHFIN STRUCTURAL REPAIR MORTAR to the required thickness (15mm to 25mm) then strike off to desired profile and wood float. As soon as the TECHFIN STRUCTURAL REPAIR MORTAR has firmed, steel trowel to final finish. Allow a maximum working time of 25 minutes when applying product to the bonding slurry.

CURING

Cure with TECHFIN ACRYLIC CURE Curing Compound using brush or roller.

MIXING

Utilizing a suitable mixer, simply add the water to the powder and mix to desired consistency. Hand mixing is permissible for one bag mixing. Use 3.5 - 4.5 L of water per 25kg bag. 1 x 25kg bag yields ± 12 L

WATCH POINTS

- Do not mix more mortar than can be used within 20 minutes.
- Do not provide less than 25mm absolute minimum cover of repair mortar over reinforcement.
- Do not re-temper or add water once the material has started to set.
- For areas where the repairs are larger than 400mm thick, steel ties with thin mesh should be inserted to support its weight.
- Moisture cure for 24 hours and then apply TECHFIN ACRYLIC CURE curing compound.