PRO REPAIR MORTAR

Fiber Reinforced, Thixotropic Repair Mortar

PROFESSIONAL
CONSTRUCTION CHEMICALS (Pvt) Ltd
Waterproofing Solutions & Construction Chemicals

Description

Pro Repair mortar is a one component thixotropic, dual shrinkagecompensated, fiber reinforced high strength formulation for structural concrete repairs.

- Can be applied vertically or **overhead** by low-pressure **wet-spraying** or hand trowelling.
- **Dual shrinkage** compensated
- **One component** - only addition of water
- High early and **ultimate strenghts**
- Quality controlled - **uniform**, predictable results.
- No additional bonding agent required
- Spray able, virtually **no rebound**
- **Impermeable** to aggressive elements
- **Capable of vapour diffusion** and resistant to frost and dew-salt
- **Resists the penetration of CO_2** and moisture (carbonistation), at the same time checks corrosion and is to a high degree resistant to saponificaiton

FIELDS OF APPILICATIONS

Up to 50mm thickness is one layer, such as:

- **Repairs** to **bridges,** parking garages, tunnels.
- Repairs to **piers,** navigation locks, **dams,** sea
- Walls and other **marine structures**
- Repairs to **Industrial structures** such as oil storage facilities, silos, chimneys etc.
- Extensive **Repairs to beams,** columns and other structural elements
- Repair of **Structural Members** subjected to
- **Repetitive loading**

PROFESSIONAL SEALERS
Waterproofing Solutions & Construction Chemicals
1st Floor, 25-E, Commercial Area, Pak Arab Housing Scheme, Main Ferozepur Road, Lahore.
professional.sealers@gmail.com, protechconstructionchemicals@gmail.com

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TECHNICIAL DATA TYPE		
Color		Grey Powder
Water/powder ratio, by weight		0.14
Density of freshly mixed mortar kg/dm³		2.3
Compressive strength, (ASTM C109, 7m cube)	1 d	2,900 PSI
	3 d	7,250 PSI
	7 d	8,700 PSI
	28 d	10,150 PSI
Flexural strength (ASTM C348)	28 d	> 1,305 PSI
Tensile strength (ASTM C396)	28 d	> 580 PSI
Resistivity approx.		12500Ucm
Resistivity approx.		< 5 mm
Diffusion		2.58 x 10^{+8}

Consumption:

One 20Kg bag of Pro Repair Mortar mixed with 2.8 liters water will yield approximately 12 liters.

Approximately four bags of 20Kg are required per 1 m^2 area at 50mm thichk application.

Supplied in:	20Kg-Bag
Storage:	Dry
Shelf-life:	12 months in closed containers
Hazard Class:	No dangerous substance follow

Processing

Surface Preparation:

The prepared surface should be structurally sound and free from contaminants. Remove concrete that has been saturated with oil or grease. Simple light sandblasting will not provide a sufficient profile for most repairs. Depending on the substrate condition and environmental requirements, use an effective method for removal of weak concrete such as, wet grit blasting, high pressure water jetting adn needle scaling. Saw cut the boundary of repair area prependicular to the surface to at least 10mm depth and remove concrete within the saw-cut boundary at least to that depth. Where saw cutting is not possible, after material removal, prepare the edge of the repair area vertical. Prepare the final surface free from dust and debris and to a rough profile with at least 5mm level difference between surface troughs and peaks. Where rebar are corroded, cut back the concrete to at least 20mm behind rebar. Grit blast around the rebar to remove corrosion products. Replace the affected part of rebar if the diameter after grit blasting is found reduced by more than 20% of the original diameter.

Mixing:

Pro Repair Mortar must be mixed mechanically. Use a heavy-duty, slow speed drill with spiral mixing paddle or a Pen Type mixers etc.
Place approximaately 80% of the water in the mixer. Keeping the mixer running, add powder slowly. Mix for 3-4 minutes or until a lump-free mix is obtained. Ad from the balance 20% water, while continuing to mix, untill the desired consistency is achieved.

Placing:

Pro Repair Mortar has been formmulated for placing both by trowel and spray application, depending on the size and loction of the repair area. For best results, before application by trowel, apply the first layer by gloved hand including packing behind the rebar, and then firmly trowel on the rest to required thickness. When applying by the hand force Pro Repair Mortar tightly on the substrate to ensure intimate contact with the pre-wetted substrate. If applying by spray, for best results, utilize the services of an experiecned nozzleman. Finish the final surface smooth using a wood, plastic or synthetic sponge faced trowel. When the material has stiffened to the point where finger pressure lightly marks the surface, give a final firm trowel ling using a steel float.

Curing:

Good curing is essential. Particular care is required in hot and/or windy conditions. Covering the work with plastic sheet fixed over wet hessian or wet foam rubber.

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