



PAKCHEM

PakChem Construction Chemical

PK MORTAR 229

Fiber reinforced, thixotropic repair mortar

PRODUCT DESCRIPTION

PK MORTAR 229 is a one component thixotropic, dual shrink age compensated, fiber reinforced high strength Formulation for structural concrete repairs.

- Can be applied vertically or overhead by low pressure wet-spraying or hand troweling
- Dual shrinkage compensated
- One component - only addition of water
- High early and ultimate strengths
- Quality controlled - uniform, predictable results
- No additional bonding agent required
- Spray able, virtually nor bound
- Impermeable to aggressive elements
- Capable of vapor diffusion and resistant to frost and dew-salt
- Resists the penetration of CO₂ and moisture (carbonization), at the same time checks corrosion and is to a high degree resistant

FIELDS OF APPLICATION

Up to 50mm thickness in 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

TYPICAL PROPERTIES

TYPE	RF4
Color	Grey Powder
Water/ Powder ratio by weight	0.14
Density of freshly mixed mortar	2.3kg/dm ³
Compressive Strength (1day)	2,900PSI
(ASTM C109,7cm ³)	3days 7,250PSI
	7days 8,700PSI
	28d 10,150PSI
Flexural Strength (ASTMC348)	28d >1,305PSI
Tensile strength (ASTMC496)	28d 580PSI
Resistivity approx.	125000cm
Water penetration (DIN1048)	<5mm
Diffusion	2.58x10

CONSUMPTION

One 25kg Bag of PK MORTAR 229 mixed with 3.5liters water will yield approximately 12.4 liters. Approximately four bags of 25kg are required per 1m² area at 50mm thick application.

Supplied in:	25-kg-bag
Storage:	Dry
Shelf-life:	9 months in close dcontainers
Test certificate:	BAM Berlin Corrosion protection no. VII. 1/25201/1 Adhesion bridge no. VII.1/25202/2
Hazardclass:	No dangerous substance follow safety datasheet

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SURFACE PREPARATION

The prepared surface should be structurally sound and free from contaminants. Remove any concrete saturated with oil or grease. Simple cleaning and blasting will not provide a sufficient profile for most repairs. Depending on the substrate condition and environmental requirements, use effective methods for removing weak concrete, such as wet grit blasting, high-pressure water jetting, or needle scaling.

Saw-cut the boundary of the repair area perpendicular to the surface to a minimum depth of 10 mm, and remove the concrete within the saw-cut boundary to at least that depth. Where saw cutting is not possible, prepare the edges of the repair area vertically after material removal.

Prepare the final surface so that it is free from dust and debris, with a rough profile having at least a 5 mm difference between surface peaks and troughs.

Where reinforcing bars are corroded, cut back the concrete to at least 20 mm behind the rebar. Grit blast the rebar to remove corrosion products. Replace the affected portion of the rebar if, after grit blasting, its diameter is found to be reduced by more than 20% of the original diameter.

MIXING

PK MORTAR 229 must be mixed mechanically. Use a heavy-duty, slow speed drill with spiral mixing paddle or a Pan Type mixers etc...

Place approximately 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. Add from the balance 20% water, while continuing to mix, until the desired consistency is achieved.

PLACING

PK MORTAR 229 has been formulated for placing both by trowel and spray application, depending on the size and location 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 hand, force PK MORTAR 229 tightly onto the substrate to ensure intimate contact with the pre-wetted surface. If applying by spray, use the services of an experienced nozzleman to achieve the best results. Finish the final surface smoothly using a wood, plastic, or synthetic sponge-faced trowel. When the material has stiffened to the point where light finger pressure leaves only a slight mark on the surface, carry out the final firm trowelling using a steel float.

WARRANTY

This product is warranted to be free from defects in materials and workmanship and to conform to the quality control standards of PakChem Construction Chemicals ("PakChem"). All recommendations, statements, and technical data contained herein are based on tests believed to be reliable and accurate; however, the accuracy and completeness of such tests are not guaranteed and shall not be construed as a warranty or guarantee of any kind, either express or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose.

The user assumes all risks, losses, damages, expenses, and liabilities resulting from the direct, indirect, or consequential use of the product. PakChem shall not be liable to the buyer or any third party for any injury, loss, or damage, whether direct or indirect, arising from the use of, or inability to use, the product.

PakChem's sole responsibility shall be limited to the replacement of any portion of the product proven to be defective. Any warranty claim must be made within six (6) months from the date of the alleged breach.

This limited warranty applies only if the product has been properly stored, installed, and used in accordance with all applicable instructions.

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