# PACTORep HB 70

**High Strength Repair Mortar/Fibre Reinforced/Non Shrink**

CONCRETE REPAIR & PROTECTION

## DESCRIPTION

**PACTORep HB 70** is a single component cementitious repair mortar which incorporates the most advanced cement chemistry, microsilica, fibre and polymer technology. This results in a rapid hardening, normal density, and high strength mortar with enhanced polymer properties. The thixotropic nature of the product enables easy high build trowel application for the structural repair of voids and re-profiling of both vertical and horizontal surfaces. The product is supplied as a single component system ready for on-site mixing and use.

**PACTORep HB 70** is shrinkage compensated. It has low permeability and is extremely durable. **PACTORep HB 70** contains no metallic aggregate and is chloride free.

## TYPICAL USES

- All types of structural repair which can be applied by trowel or wet spray.
- Repair of structural members subjected to repetitive loading.
- Repairs of exterior and interior concrete or masonry surfaces.
- Protection of concrete subject to attack from water containing chlorides and sulphates etc.
- Repairs in industrial areas, especially those containing mineral oils, lubricants.
- Repairs in marine environments.
- Filling tie rod holes

## ADVANTAGES

**Innovative:** Incorporates the latest proven cement chemistry, microsilica, fibre and polymer technology.
**Ease of use:** Materials are pre-packaged and only require mixing with clean water on site to give an easily trowellable mortar with a maximum application thickness of 50mm in both vertical and horizontal situations.

**Shrinkage compensated:** Enables high bond strength, superior to tensile strength of concrete, tobe maintained and ensures monolithic performance of the repair. **Low permeability:** Dense matrix

provides excellent protection from the ingress of acid gases, moisture and chlorides. **Fibre reinforced:** Improved tensile strength and abrasion resistance. Excellent low sag properties.

## PACKAGING

25 kg. bags

## PROPERTIES

The physical properties shown below were obtained under laboratory conditions at water: powder ratio of 0.12, and may vary in practice.

| | | | |
|---|---|---|---|
| **Compressive Strength (ASTM C 579)** | 1 day | : | >30 N/mm² |
| | 7 days | : | >50 N/mm² |
| | 28 days | : | >70 N/mm² |
| **Flexural Strength (ASTM C 580)** | 28 days | : | 10 N/mm² approx. |
| **Tensile Strength (ASTM C 307)** | 28 days | : | 5 N/mm² approx. |

## Preparation of substrate:

It is essential that the substrate to be repaired is sound, clean and free of all contamination.

The damaged areas of concrete to be removed should be clearly identified. The perimeter of the area should be saw cut to a depth of 10mm and the edges cut as neatly as possible keeping the sides square. Feather-edging is not permitted and a minimum thickness of 10mm must be maintained over the whole repair area.

The substrate should be prepared to provide a rough surface having at least 5mm amplitude at 20 mm frequency.

If reinforcement is corroded ensure that the back of the steel has been exposed. Reinforcement should have all rust removed by the use of power tools, abrasive blasting (wet or dry) or wire brushing. Reinforcing steel should be exposed and cleaned around its whole circumference. Steel should be prepared to Swedish Standard SIS 05-900:1967-SA 2½ or BS 4232 Ref. 24 second quality.

## MIXING

**PACTORep HB 70** must be mixed mechanically. The following mixing equipment is suitable, heavy duty slow speed drill with spiral mixing paddle, forced action mixer, such as Creteangle, Mixal, Pan Mixers etc.

Add 3.0 – 3.75 litres of water into the mixer. Start the mixer and add the **PACTOREP HB 70** powder rapidly and continuously. Mix for 3 minutes after all the powder has been added until mortar is homogeneous and lump free.

Add water, if necessary, within the limits given, until the required consistency is achieved. Mix for a further 1-2 minutes. The amount of water required will be affected by ambient temperature and relative humidity.

**PACTORep HB 70** can be used when the ambient temperature between 5 and 50°C. If ambient temperature is >30°C, use chilled water and condition the bagged product in an air-conditioned store prior to use. Maximum mixed temperature should be no more than 35°C.

## APPLICATION

After mixing, **PACTORep HB 70** can be sprayed or trowel applied. When applying by hand **PACTORep HB 70** must be forced tightly into the substrate to ensure intimate contact with the pre-wetted substrate. Levelling and initial finishing should be carried using a wooden or plastic float.

Final finishing should be carried out using a steel float. When the material has stiffened to the point where finger pressure lightly marks the surface, a final firm trowelling should be given using the steel float

## CURING

**PACTORep HB 70** must be cured immediately after application using wet hessian cloth wrapped with polythene sheet and taped at all edges, alternatively, a high efficiency curing compound such as PACTOCURE may be applied after thorough wetting of the surface.

## COVERAGE

One 25kg bag of **PACTORep HB 70** with 3.75 litres of added water will yield approximately 13 litres of mortar which will cover 1m² at 13 mm average thickness.

## STORAGE

Store out of direct sunlight, clear of the ground on pallets, protect from rainfall. Avoid excessive compaction. Shelf life is 12 months when stored as above.

## PRECAUTIONS

As with other products containing Portland cement, the cementitious material in **PACTORep HB 70** may cause irritation. In case of contact with eyes, immediately flush with plenty of water for at least 15 minutes. Call a physician. In case of contact with skin, wash skin thoroughly.

PAC Technologies

**P.O. Box** no 282 676 Dubai-UAE
**Tel:** +971 4 885 0 886
**Fax:** +971 4 885 0 887
**Visit us:** www.pactechnologies.ae



**OCTOBER 2013 – REV. 3**