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# TEKNOCEM HB50

## HIGH STRENGTH LOW-DENSITY CEMENTITIOUS MORTAR

### DESCRIPTION

TEKNOCEM HB50 is a high strength low density cementitious mortar which comprises of 3rd generation polymer technology to produce high strength mortar that is suitable for structural applications. It´s thixotropic nature ensures that it can be easily applied in both vertical and overhead applications. The pre-bagged mortar is reinforced with microfibers, to provide additional protection from shrinkage cracking.

### USES

TEKNOCEM HB50 is Suitable for use a re-profiling mortar for structural applications. Its low density properties make it particularly suitable for overhead and vertical applications where low slump properties are critical.

### COMPLIANCE

- Certified by the British Board of Agrément.
- Listed for use as a repair mortar for drinking water applications under Regulation 31.
- Compliance with Highways Agency Standard BD27-86.

### ADVANTAGES

- Single pack product requiring the addition of only clean water.
- Extremely low-density mortar, providing excellent anti-slump properties.
- Excellent adhesive strength to concrete and masonry.
- Primeless application.
- The cured mortar offers excellent resistance to water and chlorides.

| Property | Value |
|---|---|
| Application Temperature | 6°c to 30°c |
| Working life | 50 mins @ 20°c |
| Application Thickness | 10 to 80 mm |
| Compressive Strength | 21MPa @1 day<br>40MPa @ 7 days<br>48MPa @ 28 days |
| Water Permeability Coefficient | $5.98 \times 10^{-15}$ M/sec |
| Oxygen Diffusion Coefficient | $2.65 \times 10^{-4}$ $cm^2$ /sec |

### PROCEDURE

**Surface Preparation:** The perimeter of the repair should be saw cut to a depth of 10mm and all loose and damaged concrete should be carefully removed back to sound substrate. Any steel reinforcement within the area should be fully exposed around the full circumference of the bar. Exposed steel reinforcement should be cleaned back to bright steel, by means of grinding or grit blasting. Any surface contaminant should be removed by suitable means to ensure a good quality, clean substrate that has a compressive strength in excess of 20MPa.

**Substrate Priming:** Typically, substrates do not require the use of a separate substrate primer. The substrate should just be fully saturated with water, taking special care to ensure no standing water is present before application of the mortar. Particularly porous substrates may require the use of TEKNOPRIME 842. Exposed steel reinforcement should be primed using TEKNOPRIME 841.

**Mixing:** TEKNOCEM HB50 should be mixed using a forced action paddle mixer or pan mixer. Clean water should be poured into the mixing vessel at a rate of 3.2 - 3.7ltrs depending upon the desired consistency. The mortar should be mixed until a uniform homogeneous mix is achieved. Once



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mixing is complete the mortar application should begin immediately to ensure maximum workability of the mortar.

**Application:** TEKNOCEM HB50 can be applied as a render once a good contact coat has been applied to the substrate. Obtaining a good contact coat to the sub-base is essential to ensure the cohesion of the mortar once placed, particularly in vertical and overhead situations.

**Curing:** Once placed the TEKNOCEM HB50 should be cured in accordance with standard concreting practices. The surface should be cured using Cureaid AC to prevent shrinkage cracking occurring. The freshly applied mortar should be protected from strong direct sunlight using suitable sheeting.

## PACKAGING & COVERAGE

**Pack Size:** 25kg
**Yield:** 16.5ltrs per 25kg pack.
**Coverage:** A 25Kg bag will cover 1.65m$^2$ @ 10mm thickness.

## STORAGE & SHELF LIFE

TEKNOCEM HB50 should be stored in unopened bags in dry conditions at temperatures above 8$^o$C.

## HEALTH & SAFETY

See separate material safety datasheet.