TECHNICAL DATA SHEET

TEKNOCEM HBR



High-build Structural mortar

PREMCRETE

TEKNOCEM HBR



DESCRIPTION

TEKNOCEM HBR is a polymer-modified fibre reinforced cementitious repair mortar. The mortar incorporates shrinkage compensating additives, making it suitable for structural repair applications. The mortar can be applied to vertical and overhead substrates and
is easily finished using a steel trowel to obtain a fair faced appearance. The mortar consists of a unique blend of lightweight fillers which enable effective high-build repairs to be carried out on vertical and overhead applications without the freshly placed mortar slumping. TEKNOCEM HBR is chloride free making it suitable for application where steel reinforcement is present. The hardened mortar possesses low absorption properties offering good resistance to the effects of freeze-thaw action.

USES

TEKNOCEM HBR is used for the repair and reinstatement of structural concrete where a high-build mortar is required for application to vertical and overhead substrates. Its high strength properties make it suitable for the repair of structural elements and where high early strengths are required.

ADVANTAGES

- High-Build Application – Enables deep repairs to vertical and overhead surfaces without slumping.
- High Strength – Suitable for structural concrete repairs, with high early strength development.
- Shrinkage Compensated & Fibre Reinforced – Helps minimise cracking and provides a durable, stable repair.
- Low Absorption & Freeze-Thaw Resistant – Provides enhanced durability in exposed environments.

TECHNICAL & PERFORMANCE PROPERTIES

Property	Test Method	Value
Compressive Strength	N/A	18MPa @ 1 Day 30MPa @ 7 Days 44MPa @ 28 Days
Application Thickness	N/A	10 and 50mm
Tensile Strength at 23^{0}C	N/A	13MPa @ 28 Days
Flexural strength at 23^{0}C	N/A	6 MPa @ 28 Days
Density	N/A	1710kg/m^3
Working life	N/A	Approx. 20 mins @ 20^{0}C
BS EN 1504-3 Compliant	N/A	R3

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INSTALLATION 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 repair area should be fully exposed around the full circumference of the bar. Exposed steel should be cleaned back to clean bright steel by means of grinding or grit blasting. Any surface contaminants should be removed by suitable means to ensure a good quality clean substrate that has a strength in excess of 20 MPa.

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 HBR 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 3.75 litres depending on the desired consistency. The mortar should be mixed until a uniform homogenous mix is achieved. Once mixing is complete the mortar application should begin immediately to ensure maximum workability of the mortar.

Application

TEKNOCEM HBR can be trowel 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. If repairs are to be carried out around rebar, then it is important to hand-place the mortar to ensure good compaction around the rebar without any voids. The mortar can be placed in thicknesses between 10mm and 50mm without the need for shuttering, however support may be required depending on the exact profile that is to be achieved. In thicker sections the mortar may be placed in layers, ensuring that each layer is firm and stable, and a keyed surface has been provided before adding the next layer.

Curing

Once placed the TEKNOCEM HBR 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
14.5ltrs per 25kg pack
Coverage
A 25kg bag will cover 1.4m^2 @ 10mm thickness



STORAGE & SHELF LIFE

TEKNOCEM HBR should be kept in clean dry conditions at temperatures between 8^{0}C and 30^{0}C. When stored in unopened bags, the product will have a shelf life of 12 months.

HEALTH & SAFETY

See separate Material Safety Data Sheet.

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