TECHNICAL DATA SHEET

TEKNOCEM HB50

High Strength Low-Density Cementitious Repair Mortar



PREMCRETE

TEKNOCEM HB50



DESCRIPTION

TEKNOCEM HB50 is a high-strength, low-density cementitious repair mortar formulated using advanced polymer technology to provide excellent mechanical performance in structural concrete repair applications. Its thixotropic consistency enables easy application in vertical, overhead and soffit repairs without slumping. The mortar is microfibre reinforced to minimise shrinkage cracking and enhance long-term durability.

USES

TEKNOCEM HB50 is designed for the structural repair and reprofiling of reinforced concrete. Its low-density formulation makes it particularly suitable for overhead, vertical and soffit applications where excellent anti-slump characteristics and ease of placement are required.

ADVANTAGES

- Single-component product requiring only the addition of clean water
- Low-density formulation with excellent anti-slump properties
- Suitable for vertical and overhead applications
- Excellent adhesion to concrete and masonry substrates
- Microfibre reinforced to reduce shrinkage cracking
- Excellent resistance to water and chloride ingress
- Suitable for structural concrete repairs
- Compliance with Highways Agency Standard BD27-86.
- Complies with the requirements of BS EN 1504-3 Class R3 for structural concrete repair mortars. The product forms part of the Premcrete Concrete Repair and Protection System, independently assessed and certified under BBA Agrément Certificate 13/5008. TEKNOCEM HB50 is CE marked in accordance with BS EN 1504-3.

TECHNICAL & PERFORMANCE PROPERTIES

Property	Test Method	Value
EN 1504 Classification		Class R3
Application Temperature		6°C to 30°C
Working Life		50 minutes @ 20°C
Application Thickness		10–80 mm
Compressive Strength		21 MPa @ 1 day 40 MPa @ 7 days 48 MPa @ 28 days
Flexural Strength		6.5 MPa
Static Modulus of Elasticity		≥ 15 GPa (BBA R3 Classification)
Water Permeability Coefficient		5.98×10^{1} m/s^{-5}
Oxygen Diffusion Coefficient		272 × 10 cm²/s^{-6}
BBA Certification		Agrément Certificate 13/5008

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INSTALLATION PROCEDURE

Surface Preparation

The perimeter of the repair should be saw-cut to a depth of approximately 10 mm and all unsound concrete removed to expose a sound substrate. Exposed reinforcement should be fully uncovered and cleaned to bright metal by grit blasting or mechanical preparation. The substrate should be clean, sound and possess adequate strength.

Priming

Substrates do not normally require a bonding primer. The substrate should be thoroughly pre-soaked and brought to a saturated surface-dry (SSD) condition before application. Highly porous substrates may require TEKNOPRIME 840. Exposed reinforcement should be protected with TEKNOPRIME 841.

Mixing

Mix using a forced-action mixer, pan mixer or slow-speed paddle mixer. Add 3.2–3.7 litres of clean water per 25 kg bag depending on the desired consistency. Mix until a uniform, homogeneous mortar is achieved.

Application

Apply after working a firm contact coat into the prepared substrate. Build up to the required thickness in layers as necessary. Particular attention should be given to achieving full compaction in overhead and vertical applications.

Curing

Apply PREMCRETE CUREAID AC immediately after finishing to minimise moisture loss and reduce the risk of shrinkage cracking. Protect freshly applied mortar from direct sunlight, wind and adverse weather conditions.

PACKAGING & COVERAGE

Pack Size

25kg bag.

Yield

Approximately 16.5 litres per 25 kg bag.

Coverage

Approximately 1.65m² at 10mm thickness.



STORAGE & SHELF LIFE

Store in unopened bags in dry conditions and protect from frost and moisture.

HEALTH & SAFETY

See separate Material Safety Data Sheet for information relating to safe handling, storage and disposal.

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