

## **BONDCRETE HB** (HIGH BUILD, FIBRE REINFORCEMENT REPAIR MORTAR)

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**BONDCRETE HB** is a single component, polymer reinforced, high-strength, cement-based patching and resurfacing mortar. It is supplied as a ready to use dry powder requiring only the addition of water to produce cohesive easily applied mortar. **BONDCRETE HB** has been designed to repair, slope or level structurally sound, interior and exterior concrete surfaces that are pitted, worn, scaled or spalled. In addition, this product can be used to repair concrete members and deep voids. When properly applied, **BONDCRETE HB** will produce a strong, durable, well bonded surface of desired texture.

### **USES**

The excellent workability, wear resistance and polymer-reinforced bond strength of **BONDCRETE HB** make it ideal for patch repairs of existing concrete, such as commercial warehouse and industrial floors, sidewalks, stair walls, curbs and gutters, driveways, and concrete parking decks. Additional uses of **BONDCRETE HB** include stamped concrete overlays and decorative finishes, in conjunction with integral or topically applied colors. **BONDCRETE HB** is recommended for structural reinstatement of damaged concrete for beams and columns in inland and marine environments, and as a general purpose repair mortar for concrete floors and highly trafficked areas.

### **ADVANTAGES**

- Can be placed as a mortar or an overlay.
- High abrasion resistance.
- Excellent bond strength to sound concrete substrates and steel.
- Strength matched for longer life.
- Easy to use: Easily trowel applied.
- Durability: Low water cement ratio. Low porosity. Good resistance to carbonation and chloride penetration.
- Repair all types of structural which can be applied by trowel.
- Iron free: No metallic iron to cause staining or deterioration to rust expansion.
- Chloride free: Good strength development without the use of chlorides.
- Non-shrink: Shrinkage compensated.
- Fibre reinforced: Minimizes plastic shrinkage.

Chemically Engineered Products

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### SURFACE PREPARATION

All surfaces to receive **BONDCRETE HB** must be clean and free from all dust, paint, sealers, curing compounds or any other anti adherents. Chip-open the loose concrete until reaching sound base. Avoid feather edges by cutting the edges to a straight cut. Clean the substrate. Substrates contaminated with grease, oil or dirt should be cleaned and treated with a suitable degreaser. Saturate the substrate with clean water prior to placement

### MIXING

Mixing ratio: 3.6 lt. potable water to 25 kg **BONDCRETE HB** bag. The mortar may be mixed either by hand or by mechanical mixer. In case of hand mixing do not mix quantities greater than 10 kg at one time. For mechanical mixing, slow speed drill/ paddle mixer (approx. 400 rpm) can be utilized. Pour approx.  $\frac{3}{4}$  of the measured water needed into the mixer then add **BONDCRETE HB** slowly while mixing. After 3-4 minutes add the remaining water and mix until the mortar has the required lump free consistency.

### APPLICATIONS

**Priming:** Apply one coat of **T- Bond A** to the area to be patched immediately prior to placing the mortar. **Steel primer:** Steelwork should be primed before new corrosion with **T- Bond ZR**. **BONDCRETE HB** mortar may be applied by trowel or spatula. Use the mixed mortar without delay. Firmly place **BONDCRETE HB** mortar into the damp primed area and form to a final configuration working from edge to eliminate air voids.

For repairs that require multi-layer applications always ensure that the preceding layer is stable but not fully set before applying a final finish layer.

**Thickness:** Application thickness on overhead and vertical in one layer is approx. 50 mm. A thickness of 100 mm can be achieved in multi-layer application.

**Curing:** Protect exposed surfaces from excessive heat and cold. Cover surfaces with wet burlap and keep damp for 24 hour at least immediately after initial set

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#### **COVERAGE**

25 kg bag covers approx. 4 m<sup>2</sup> areas at 3 mm.

Yield: 12.8 liters per 25 kg bag.

#### **TYPICAL PROPERTIES**

The following results were developed under laboratory conditions.

<b>Pot Life at 25°C</b>	: 35 minutes
<b>Bond Strength</b>	: 1.8 N/mm <sup>2</sup>
<b>BS 1881 Part 207</b>	: 28 Days
Flexural Strength	ASTM C 580
7 Day	> 6.0 N/mm <sup>2</sup>
28 Day	> 7 N/mm <sup>2</sup>
Compressive Strength	ASTM C 109: 99
1 Day	> 20 N/mm <sup>2</sup>
7 Day	> 45 N/mm <sup>2</sup>
28 Day	> 55 N/mm <sup>2</sup>
Setting Time:	BS EN 196 - 3
Initial	2.0 hours
Final	2.5 hours

NB: 50 mm cubes @ 25 °C

**Chloride Content (BS 1881 124 – 88) : 0.04 %**

**Mixed Density:** 2,100 kg/m<sup>3</sup> giving a yield of a 12.8 litres per 25 kg bag at mortar consistency.

**Packing BONDCRETE HB** is available in 25 kg bags

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### **PACKING & STORAGE**

#### **STORAGE**

**BONDCRETE HB** should be stored in original undamaged packs in cool and dry storage area. The shelf life of **BONDCRETE HB** is one year. The material must not be allowed to freeze or placed in open sunlight.

#### **HEALTH & SAFETY**

**BONDCRETE HB** is non-flammable and non-toxic in nature. Avoid contact with eyes and skin as it may cause irritation due to its alkaline nature. Splashes of **BONDCRETE HB** should be washed off immediately with clean water. Wear necessary gloves and dust mask.

#### **LIMITATIONS**

Surface and application temperature should be more than 7°C. Apply only to thoroughly clean, sound substrate. Surface should be saturated. After placing, protect from direct heat and sun. Use mechanical mixer to avoid lumps. Avoid application in rain or contaminated surface. Do not add cement, sand or accelerator.

#### **PRECAUTIONS**

**Protection:** All works must be protected from rain and frost until fully hardened.

**Cleaning:** Clean application tools and mixing equipment with water immediately following use.

Whilst the information and / or specification given are to the best of our knowledge true and accurate, no warranty is given or implied in connection with any recommendations or suggestions made by us, our representatives, agents or distributors as the conditions of use and any labour involved are beyond our control.

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