



# BUILD PLUS

## CONSTRUCTION CHEMICALS

### **Buildcrete-HB** (Fibre reinforced, High Strength, Concrete Surface Repair Mortar)

*Buildcrete-HB is a single component, fibre reinforced, high-strength, polymer modified, cement-based patching and resurfacing mortar for horizontal, vertical, and overhead concrete surfaces.*

**Features:** It is supplied as a ready to use dry powder requiring only the addition of water to produce cohesive easily applied mortar. Buildcrete-HB has been designed to repair slope or level structurally sound interior and exterior concrete surfaces that is pitted, worn, scaled or spalled. In addition, this product can be used to repair deep voids. When properly applied, Buildcrete-HB will produce a strong, durable, well bonded surface of desired texture.

**Uses:** The excellent workability, wear resistance and polymer-reinforced bond strength of Buildcrete-HB makes 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 Buildcrete-HB include stamped concrete overlays and decorative finishes, in conjunction with integral or topically applied colours. Buildcrete-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:** Cost effective, time saving, no primer or curing agent required, High performance - excellent bond to concrete substrate and steel, resistance to carbonation and chloride penetration, shrinkage compensated, user friendly - requires addition of water only, Suitable to receive protective coatings, High abrasion resistance.

#### **Directions for use:**

**Surface Preparation:** Surface must be clean and free from dust, paint, sealers, curing compounds or any other anti adherents etc. Chip off the loose concrete until reaching sound base. Feather edges should be cut to a straight cut. Saturate the substrate with clean water prior to application of Buildcrete-HB.

**Mixing:** Care should be taken to ensure that Buildcrete-HB is thoroughly mixed. Add 3.6 litres of potable water to 25 kg Buildcrete-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 or paddle mixer (approx. 400 rpm) can be utilized. Pour approx.  $\frac{3}{4}$  of the measured water needed into the mixer then add Buildcrete-HB slowly while mixing. After 3-4 minutes add the remaining water and mix until the mortar has the required lump free consistency.

**Application:** Apply one coat of GMC T- Bond A to the area to be patched immediately prior to placing the mortar. Steel reinforcements should be primed with Zinc Rich Primer (BP Bond-ZR). Buildcrete-HB mortar may be applied by trowel or spatula. Use the mixed mortar without delay. Firmly place Buildcrete-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 & vertical in one layer is approximately 50 mm. A thickness of 100 mm can be achieved in multi-layer applications.

#### **Curing:**

Protect exposed surfaces from excessive heat and cold. Cover surfaces with wet burlap and keep damp for 24 hour immediately after initial set drying.

#### **Workability:**

Working time of Buildcrete-HB is 30 minutes at 25<sup>0</sup>C, after 5 minutes standing time.

#### **Coverage:**

25 kg bag will provide 12.8 litres of yield and will cover approximately 4m<sup>2</sup> areas at 3mm thickness.

#### **Typical Properties:**

The following test results were developed under laboratory test conditions:

Initial Setting time	: 120 minute at 25 <sup>0</sup> c
Final Setting time	: 2 hrs 45 minutes
Compressive Strength	: 20.0 N/nm <sup>2</sup> at 1day
(ASTM C 109 : 99)	: 45.0 N/nm <sup>2</sup> at 7 days
	: 55.0 N/nm <sup>2</sup> at 28 days
Flexural Strength	: 6.0 N/nm <sup>2</sup> at 7days
(ASTM C 580)	: 7.0 N/nm <sup>2</sup> at 28 days

#### **Composition:**

Graded silica sand, Portland cement, fibre, shrinkage compensating polymer additives and admixtures

**Appearance:** Grey powder

**Pack Size:** 25 kg plastic sacks



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### Code Practice:

Concrete repairing should be carried out in accordance with up-to-date relevant British Standard or BS Codes of Practice, details of which can be obtained from British Standard Institute, British Standard House, 2 Park Street, London W.1.

### Shelf Life & Storage:

12 months if stored properly in original unopened packing in dry, cool, ventilated conditions away from direct sunlight.

### Precautions:

- Do not add any admixture or fluidifiers
- Proper curing is required
- Store materials in a dry place
- Do not use this materials as a topping
- Do not use material at temperatures that may cause premature freezing

### Handling:

**Buildcrete-HB** is a 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 Buildcrete-HB should be washed off immediately with clean water. Wear necessary gloves and dust mask.

### Technical support:

GMC offers comprehensive technical support service & specification assistance in locations to our channel partners, end users, and contractors.

### Quality & Care:

All the products manufactured and originated from Gulf Minerals and Chemicals, UAE facility are independently tested and certified under a GMC Management System to conform to the requirements of the quality, environmental, health & safety Standards.

### Health & Safety Precautions:

**Buildcrete-HB** releases alkalis when mixed with water which can be harmful to the skin. Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment. The use of barrier creams provides additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water.

----- Buildcrete-HB -----

