

Technical Data Sheet - TDS



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RocBuild HF

Shrinkage compensated, fibre reinforced, structural repair mortar

DESCRIPTION

RocBuild HF is a single pack structural grade, polymer modified, fibre reinforced cementitious repair mortar.

RocBuild HF is a high strength reinstatement mortar with shrinkage compensating properties. The product is ready to use, requiring only the on-site addition of water.

RocBuild HF consists of a blend of Portland Cement graded silica sands, styrene polymers, non-asbestos fibres and shrinkage control agents. Drying shrinkage is controlled to ensure complete void filling and therefore effective load transfer. **RocBuild HF** is a quality controlled repair mortar that exhibits low slump characteristics coupled with remarkable ease of application. The presence of a polymer ensures an excellent bond to most surfaces and improves such properties as impermeability, flexural and tensile strength. Cellulose fibres improve water retention to aid complete hydration of the cement.

FIELDS OF APPLICATION

For structural repair programs reinstating chloride attacked or structurally damaged concrete. Suitable for repairs in marine environments where gun applied mortar is required.

ADVANTAGES

- ▶ High strength and related physical properties.
- ▶ Cellulose fibres improve water retention.
- ▶ Excellent bond to concrete substrates
- ▶ Contains no chloride additives.
- ▶ Shrinkage compensated for use in structural reinstatement applications.
- ▶ Prepackaged to provide reliable and reproducible site results.
- ▶ Compatible with **RocCote** and other protective coating systems.

TYPICAL PROPERTIES

Mixed Density	1.85±.05Kg/m ³
Color and Appearance	Grey powder
Slant shear bond strength (Bs 1881)	24/mm ² @28 days
Flexural Strength (BS 1881)	5.5N/mm ² @28 days
Tensile Strength (BS 1881)	1.5N/mm ² @28 days
Tensile Strength (BS 1881)	50N/mm ² @28 days
Adhesion Strength (BS1881)	1.5N/mm ² @28 days

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Water Absorption (SAT BS 1881)	01.8ml/m ² /sec at 10 mins
Drying shrinkage (ASTM C 596)	360 micro strain @ 28 days

DIRECTIONS FOR APPLICATION

Substrate Preparation: The perimeter of the area to be prepared must be clearly marked. The substrate must be sound and free from dust, oil, grease or other contaminants and should be suitably textured to provide adequate mechanical key; water jetting or needle gunning may achieve this. Edges must be cut back to at least 12mm to avoid feather edging. After preparation if the substrate is still weak or the steel is still corroded the extent of the area to be repaired must be increased. The surface should then be cleaned with oil-free compressed air.

Priming: The reinforcement must be fully exposed and thoroughly cleaned around its whole circumference during preparation. Grit blasting to SA2½- SIS215-900:67 is the preferred method. The steel should then be coated with **RocBuild ZP**.

Selection of a concrete bonding agent will depend on the cause of the damage. For chloride induced repairs use RocFloor **EP Primer**. Being epoxy based the bonding agent will seal the perimeter of the repair preventing chlorides from migrating to the repair from the parent concrete. For all other repairs use either **RocBuild PS**.

Mixing: It is recommended that **RocBuild HF** is mixed by forced action mixer (e.g. Creteangle) adding the powder to the water and mixing for approx. 3 minutes until homogeneous; care must be taken to avoid over-mixing since air-entrainment could reduce the properties of the material. **RocBuild HF** requires 3.9 litres of water per bag. This may be adjusted + 10% to vary the consistency of the mix..

Application: RocBuild HF must be applied whilst the priming coat is still tacky; compact with a rubber gloved hand or wooden trowel. Ensure complete contact and compaction with the substrate. Finish with a steel float. Thicknesses of 30-50 mm are possible in one coat, depending on application parameters. For deeper sections, multiple applications will be necessary; intermediate coats should be textured to provide a key for subsequent coats. Successful applications will not require the use of the primer coat provided that the re-application is undertaken within 2 hours; if required use **RocBond AR**.

Curing: Proper curing of **RocBuild HF** is essential, use wet hessian and polyethylene sheet for 3 days. If water curing

proves impractical use **RocCure CL** immediately after initial set and provide full protection from sun and drying winds.

SURFACE TREATMENTS

In order to unify the appearance of a structure and to prevent further deterioration by the ingress of water and carbon dioxide, the use of one of the RocCote/RocCrete range of coatings is recommended.

PACKAGING & STORAGE

RocBuild HF is available in 25 kg bags and should be stored as cement, under dry frost-free conditions. Shelf life will be 9 months.

HEALTH & SAFETY

As with all **CIL** chemical products, care should be taken to avoid contact with skin, eyes, mouth and foodstuffs. Treat splashes to eyes and skin immediately, by thorough washing with clean water. If ingested seek medical attention.

OTHER BONDING AGENTS AND TILING PRODUCTS AVAILABLE FROM CIL.

FROM CIL.

- ▶ **RocBuild EL**--High build epoxy lining for chemical & abrasion resistance Applications
- ▶ **RocBuild MC**--Shrinkage compensated, polymer modified, micro concrete
- ▶ **RocBuild TG** --Single component, hot climates, concrete and masonry Reinstatement Repair mortar
- ▶ **RocCoat NT** --Non-toxic, epoxy resin coating for potable water applications
- ▶ **RocBond AR**--Single component acrylic bonding agent and Primer
- ▶ **RocBuild HL**--Lightweight High Build Cementations' repair mortar
- ▶ **RocBuild NF**--Multi purpose, non slump adhesive & repair putty
- ▶ **RocBuild ZP** --Single component, epoxy zinc primer for steel
- ▶ **RocCoat PE** --Solvent free pitch extended epoxy resin protective coating
- ▶ **RocBuild FC**--Single component, polymer Modified fairing coat
- ▶ **RocBuild HS**--Shrinkage compensated, High Strength, Fibre Reinforced, Structural Repair mortar

Please read all information in the general guidelines, product data sheets, guide specifications and material safety data sheets (MSDS) before applying material. Published technical data and instructions are subject to change without notice. Contact your local Product representative or visit our website for current technical data and instructions.

Disclaimer

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the user's responsibility to satisfy himself, by his own information and test, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazard listed herein are the only ones which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer? Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and CIL makes no claim that these tests or any other tests, accurately represent all environments.

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