

CONCRETE ROCK V2

Tech. Sh. FS32

FRP SYSTEM

Technologies and materials for
consolidation



CE
EN 1504-3

Ready-mixed and ready-for-use two-components cementitious compound no shrink mortars for patching, restoring of concrete

Description

CONCRETE ROCK V2 is two-components non-shrink, fibre-reinforced mortar not containing expansible metallic substances or chloride, characterized by high mechanical resistance, low modulus and suitable for restoration work in concrete structures and application in the cycles of FRCM and SGR concrete reinforcement. CONCRETE ROCK V2 is marked CE according with EN 1504-3, Class R4.

Uses

CONCRETE ROCK V is a thixotropic, fibre-reinforced mortar, suitable for patching and/or restoration work in structures in concrete such as beams, pillars, slabs, sills and panels. This product is also suitable for sealing the folds/faults between brickwork and/or stone in ruined masonry and for the creation of reinforced slabs in static consolidation work in seriously weakened masonry.

CONCRETE ROCK V2 is a mortar suitable for the support preparation in the FRP SYSTEM applications.

CONCRETE ROCK V2 is the basic inorganic matrix in the concrete and masonry reinforcement of structures for the application of carbon C-NET and steel galvanized fabric STEEL NET G

Advantages

With its particular formulation and with optimum grading aggregates, the product is characterized by its durability, impermeability and high degree of anti-carbonation and chemical and mechanical resistance. CONCRETE ROCK V2 is free from shrinkage and bleeding. It is strongly recommended when concrete structures are important for dimension and span, stressed by movements caused by traffic, wind and temperature changes. Concrete Rock V2 can be applied in various thicknesses between 10 and 50 mm in once with the appropriate technique.

Technical data

Sp. gr. of powder	1.80 g/cm ³
Setting time at 20°C (start min)	60 min.
Resistance to compression 28 days	45 MPa
Resistance to flexion 28 days	12 MPa
E-modulus 28 days	< 15,000 MPa
Adhesion test on concrete 28 days	>2.5 MPa
Bleeding	no bleeding
Resistance to carbonation	resistant
Sulphates resistance	no attack after immersion in magnesium sulfate
Temperature application	5°C - 45°C

Instruction for use

The surface to be covered must be thoroughly cleaned and any dust, loose material, grease or oil must be removed before applying.

Thoroughly clean by brushes or mechanical system surface, any exposed reinforcement or support bars and roughen the surface to an appropriate degree of roughness. Add or replace corroded rebars. Wet the surface special in hot climates or a primer Cemecol diluted in water can be used. Any excess water, on surface level or in cavities, must be removed, using compressed air and/or a sponge, before application. Exposed reinforcement bars and structural metal must be protected by FERROSAN.

Mix together in a cement mixer the Comp. B liquid adding slowly continuously the Comp. A powder in the ratio of 5:25 on wt (ratio of packaging). Mix continuously for 2-3 minutes until obtaining an homogeneous mortar with no lumps. For small quantity use a mechanical stirrer. Avoid to mix manually. Do not add water normally.

Small quantity of water can be added specially in hot climates.

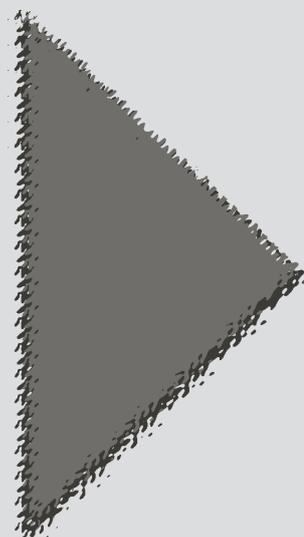
The mortar can be apply by spatula, trowel for patching and pump for large surfaces. In case of using pump specific measures have to be adopted according with length and height of casting. Ask to the Company for further recommendations. Apply maximum thickness of 5 cm per hand. In case of more hands avoid the complete setting of previous hand. Float the surface at the end by plastic trowel on the right time of setting according also with the external temperature.

When applied, keep the product protected and humid for the subsequent 24 hours to avoid rapid dehydration of the mortar.

For using CONCRETE ROCK V2 on support smoothing before application of FRP SYSTEM wait until mortar is hardened.

For using CONCRETE ROCK V2 as inorganic matrix in the cycles of FRCM-SRG, install the carbon C-NET mesh or steel fabric STEEL NET G in the fresh mortar, making sure the reinforcement is perfectly impregnated, and avoiding the creation of air bubbles.

Then, apply a second layer of mortar totally covering the reinforcement and not waiting until the mortar is completely hardened. For the application of various layers of reinforcement it is necessary to proceed applying the materials on a fresh underlying layer as in the previous cycle. For the overlays follow the project requirements, however with a minimum of 10 cm in the direction of the fibre. When required by the design apply the AFIX or SFIX G connectors for anchoring. Consult also the specific technical sheet of reinforcement used.



Yield

The average consumption of CONCRETE ROCK V2 is 18 Kg/m² per cm of thickness.

Colour

Cement grey.

Packing

Comp. A 25 kg. bag.

Comp. B 5 kg pail.

Caution

Avoid creating high-thickness vertical layers. If the weight of product becomes excessive, tearing and cracks may appear. Care must be taken when mortar is applied on windy or very hot days.

To avoid very rapid evaporation of the water it is necessary to keep surfaces humid and protected.

Do not apply CONCRETE ROCK V2 when the temperature falls below 5°C or is likely to fall to such levels in the following 12 hours

Storage

Shelf-life of 12 months when stored in the original sealed packaging in dry place.



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