



# Vetorep CR520

High strength structural repair mortar

## Uses

- Repair of broken structural concrete elements.
- Vertical concrete repair up to 75 mm in a single layer.
- Overhead concrete repair up to 20 mm in a single layer.
- Horizontal and patch repairs up to 100 mm in a single layer.
- Honeycomb repairs, general concrete repairs.

## Product Description

Vetorep CR520 is a single component polymer modified fibered cementitious structural repair mortar that is ready to use and only requires adding water on site. Once mixed, the product becomes a thixotropic mortar that is hand applied to repair demanding structural repair while being compatible with host concrete. Vetorep CR520 is composed of a blend of hydraulic cement, carefully selected and graded aggregates, fibers, and special additives to give it its unique properties.

## Advantages

- Easy to use, a single component product.
- High physical and mechanical properties.
- Extremely low permeability providing reinforcement protection against corrosion as well as resistance to ingress of contaminants.
- Non-Shrink properties ensuring repair dimensional stability.
- Suitable for internal and external applications.
- Breathable, compatible with host concrete.
- Thixotropic properties allowing high build up in vertical and overhead repairs.

## Standards Compliance

- BSEN 13062
- BSEN 1504

## Technical Data

Vetorep CR520	Typical Values
Drying Shrinkage ASTM C157	< 0.003% @28 days
Water Penetration DIN 1048	<5 mm
Fresh Mixed Density	Approximately 2 kg/ltr
Compressive Strength ASTM C109	@ 1 day ≥ 20 MPa @ 3 days ≥ 30 MPa @ 28 days > 50 MPa
Flexural strength ASTM C348	> 6 MPa@ 28 days.
Tensile Strength ASTM C307	> 1.5 MPa @ 28 days
Rapid Chloride Permeability ASTM C1202	<500 Columbs
VOC Content ASTM D2369	<10 gm / Liter (LEED Compliant)
Adhesion Strength @ 28 dayS, ASTM C1583	> 1.5 MPa

## Usage Instructions

### Surface Preparation

Cut back all damaged and weak concrete to reach sound concrete and/or to a minimum depth of at least 10mm.

Grit blast corroded steel reinforcement to remove all rust traces. In case of significant loss in the steel reinforcement cross-section, replace the steel. Remove all concrete forms around the exposed steel reinforcements by a thickness of 25mm. Saw cut the perimeters of the repair area to a minimum depth of 10mm. Clean the prepared area thoroughly by using a brush and/or compressed air.

### Priming

To accept Vetorep CR520, prime all grit blasted steel reinforcements within 2 to 4 hours by applying one or two coats of corrosion inhibitor for steel reinforcement Vetoprime CP436.

Soak the areas to be repaired with Vetorep CR520 with clean water before applying the repair mortar. Remove all excess water before the application of one coat of acrylic bonding agent Vetobond AB432.

Allow Vetobond AB432 to become tacky before applying the repair mortar.

### Mixing

To ensure proper mixing, use a mechanical power mixer or drill fitted with a suitable paddle. Add 3.5- 4 liters of clean water to a clean container. Then add the powder to the water slowly while mixing continuously with a low-speed mixer/drill (400 - 600 rpm). Continue mixing for 5 minutes until obtaining a uniform consistency.

### Placing and Finishing

Apply Vetorep CR520 by a trowel or by hand. Apply the mixed mortar by pressing it firmly to fully compact the mortar and ensure good adhesion with the steel reinforcements and the substrate. Initially, finish and level the material surface by a wooden or plastic float. Carry out the final finishing using steel float.

For high thicknesses applications, vertically and overhead, it is better to gradually apply it by hand in patches with a firm pressing; this ensures the adhesion with the substrate and the subsequent layers for the CR520.

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### Curing

Vetorep CR520 is a cementitious-based material; it is similar to a concrete cure by continuous watering and covering with polyethylene sheets.

### Cleaning

Clean all tools immediately after application by using freshwater. Clean hardened materials mechanically.

### Limitations

Apply Vetorep CR520 in a single application for sections up to 20mm thick in overhead applications and 75mm thick in vertical applications. The thickness should not be less than 10mm deep in all applications.

## Packaging & Coverage

Product	Pack Size	Consumption
Vetorep CR520	25 Kg Bag	14 Liters Yield
Vetobond AB432	4 Liter Can	6-8 m <sup>2</sup> / Liter
Vetoprime CP436	2Kg & 4kg Kit	1.18m <sup>2</sup> /2kg Kit @ 1mm 2.35m <sup>2</sup> /4kg Kit @ 1mm

Note: Vetorep CR520 repaired area should not exceed 2.5 m<sup>2</sup> in a single application.

Stated consumption data are for general guidance. Actual consumption depends on the nature of substrate, method of application, and wastage.

## Shelf Life & Storage

The original sealed bag of Vetorep CR520 has a shelf life of 12 months, provided it is stored clear of ground in a dry and shaded temperature-controlled place, at temperatures between 5°C - 35°C.

## Health & Safety

Vetorep CR520 contains reins which may cause sensitization by skin contact. Avoid contact with skin and eyes and inhalation of vapor. Wear suitable protective clothing, gloves, and eye/face protection. Barrier creams provide additional skin protection. Should accidental skin contact occur, remove immediately with a resin-removing cream, followed by soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water, and seek medical advice. If swallowed, seek medical attention immediately. Do not induce vomiting.

Vetorep CR520 is non-flammable. For further information, please refer to the Product Material Safety Data Sheet.