

Ready-to-use non-shrink fibre-reinforced fine-grain structural-repair mortar,
with a pourable consistency



Description

Betonfix CR is a ready-to-use non-shrink fibre-reinforced fine-grain mortar, with a pourable consistency and high mechanical resistance properties for both short and long curing, enriched with corrosion inhibitors. It consists of cement-based binders, selected inert materials and

additives giving it excellent smoothness, adhesion to the substrate and high resistance to sulphates. Betonfix CR is compliant to the UNI 8147 standard.

Betonfix CR meets the principles set out in EN 1504-9 ("Products and systems for the protection and repair of concrete structures: definitions, requirements, quality control and conformity assessment. General principles for the use of products and systems") and is CE marked as R4 mortar according to the requirements of EN 1504-3.

Uses

Betonfix CR is used to consolidate, recover and increase the load-bearing capacity of reinforced concrete structures or, in masonry structures, to create composite-action concrete castings. It is used to recover large missing layers of deteriorated reinforced concrete structures where metal reinforcements are visible. It is also used to fill rigid structural joints with thicknesses of over 5 cm in both civil and industrial prefabrication. Can also be used for repair of deep holes in concrete floorings, ceilings and road and railway beds. Do not use for precise anchor machinery (for this purpose use Betonfix AL).

Application

Betonfix CR is ready-to-use on the addition of 3,3-4,2 litres of drinking water per 25 kg bag, according to the consistency required (fluid or very fluid). The substrate to be treated must be perfectly clean, free from grease, oil and separating agents in general; roughen the concrete surface with a bush-hammer. Where metal reinforcements are visible, remove any adjoining concrete and protect them with Betonfix KIMIFER, applied by brush. Soak the area to be treated eliminating any pools of water when casting. Mix Betonfix CR for about 5 minutes with a cement-mixer adding 3/4 of the water required and then pour the product and the remaining water until you obtain the consistency required. The patch layers must have an appropriate reinforcement under pressure anchored to the existing structure with an embedded steel bar minimum 2 cm thick. For particular applications, our Technical Support Service will supply further information.

Packaging

25 kg multilayer polythene bag. 1,500 kg pallets.

Coverage

2000 Kg/m³.

Storage

Protect from humidity. Store the product in a dry, sheltered place. Stored in these conditions and in unopened containers, the product remains stable for 12 months.



| Characteristics | Value |
|--|------------------------------|
| Appereance | Powder |
| Colour | grey |
| Apparent specific weight UNI 9446 | 1,85 ± 0,1 g/cm ³ |
| Hazard classification 1999/45/CE e 67/548/CEE | Irritant |
| Maximum inert material size UNI EN 1015-1 | 6 mm |
| Apparent volumetric mass of wet mortar UNI EN 1015-6 | 2250 ± 50 Kg/m ³ |
| Consistency UNI 7044/72 | >200 % |
| Setting time (start) UNI EN 196-3 | 150 ± 30 mins |
| Setting time (end) UNI EN 196-3 | 240 ± 30 mins |
| Minimum application temperature | +5 °C |
| pH of mixture | 12 ± 0,5 |
| Stability UNI EN 196-3 | < 10 mm |
| Exudation UNI 8988 | Absent |

| Caratteristica | Limits for R4 mortars | Value |
|--|--|--------|
| Compression strength 28 days UNI EN 12190 [MPa] | ≥ 45 | > 45 |
| Modulus of elasticity on compression EN 13412 [GPa] | ≥ 20 | > 20 |
| Chloride content EN 1015-17 [%] | ≤ 0,05 | < 0,05 |
| Concrete adhesion (UNI EN 1542) [MPa] | ≥ 2 | > 2 |
| Concrete adhesion (UNI EN 1542) after dry-thermal ageing EN 13687-4 [MPa] | ≥ 2 | > 2 |
| Concrete adhesion (UNI EN 1542) after thunder-shower cycles EN 13687-2 [MPa] | ≥ 2 | > 2 |
| Concrete adhesion (UNI EN 1542) after frost-thaw cycles EN 13687-1 [MPa] | ≥ 2 | > 2 |
| Resistance to accelerated carbonation, UNI EN 13295 | Carbonation < than control value UNI EN 1766 | OK |
| Waterproofing (capillary absorption coefficient, UNI EN 13057) [Kg/m ² ·h ^{1/2}] | ≤ 0,5 | < 0,5 |

Warning

Product for professional use. The addition of more water than recommended will cause the components to separate and lead to the loss of the product's mechanical and chemical properties. Do not remix the product by adding water once it has started to set: it will lose all its chemical and physical properties. Do not add concrete, additives or other Betonfix mortars. Before using, check bags have not been damaged, and do not use the product if there are any lumps. Use the entire contents once the bag has been opened. Take all necessary precautions to ensure correct curing of castings. Do not use at temperatures below +5 °C. Wet with water for the first 48 hours, or cover with plastic coverings or damp jute bags.

The technical specifications and application methods recommended herein are based on our current knowledge and experience and do not represent any form of guarantee of the final results obtainable with the product. It is the customer's responsibility to check that this data sheet is still effective and has not been replaced with a more recent version, and that the product is suitable for the intended use.

