



# MORTAR FOR STRUCTURAL REPAIRING OF CONCRETE (modified with polymers and fibres) Class R3 in accordance with UNE-EN 1504-3

## BIKREPAR 5000-300ER



### Product description

- Single component structural repair mortar based on cement, aggregates of a selected grain size, aggregates, fibres and polymers.

### Characteristics

- Class R3 in accordance with standard UNE-EN 1504-3
- Thixotropic mortar with an excellent workability.
- High adherence to the concrete.
- High mechanical strength.
- Manually or mechanically applied by means of a wet spray.
- A1 fire classification.
- Indoors as well as outdoors.

### Applications

- The repairs of thick layers of concrete elements like edges of balconies, beams, pillars, ceilings, brick walls, concrete block walls, stairways, prefabricated parts, etc.
- Regularization of concrete surfaces.
- Grouting of prefabricated concrete elements.
- Suitable for use in large areas as well as for small repairs.
- Suitable for use on vertical surfaces as well as ceilings.
- Recommended thicknesses:

Vertical applications	10 - 30 mm.
Horizontal applications	10 - 50 mm.

- Complies with the requirements for the following Repair Principles in accordance with Standard UNE-EN 1504-9:
  - ☒ Repairing concrete by applying mortar by hand or sprayed (Principle 3, methods 3.1 and 3.3).
  - ☒ Structural reinforcement of concrete by adding mortar (Principle 4, Method 4.4)
  - ☒ Preservation or repair of the passivate by increasing the cladding of the reinforcement with mortar or by replacing the contaminated/carbonated concrete (Principle 7, Methods 7.1 and 7.2).

### Other applications


- BIKREPAR 5000-300ER can also be used as a bonding layer between the concrete and BIKREV rendering mortars.
- In this case, apply a first layer of BIKREPAR on the concrete that must be clean of dust, oils, fats, etc.... Later, once hardened, proceed to apply the rendering mortar.

### Precautions

- Check that the product to be used is suitable for the type of support and the type of work that is going to be carried out.
- Always mix the product with the recommended amount of water. Do not remix or add cement, sand or aggregates.
- The ambient temperature during the application of the product must be between 5° C and 35° C.
- Do not use on waterproof supports, plaster or plastic cladding. Never use on frozen surfaces.
- Clean the tools immediately after use. Once the product has hardened, the remains can only be removed using mechanical means.
- Avoid breathing the powder and contact of the mixed product with the skin and the eyes. For more information consult the applicable Safety Data Sheet.

### Standards

CE marking of the product as per the European Rules for construction products.

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Morteros y Revocos BIKAIN, S.A. B/Aldebarrena, no. 18 48212 (Mañaria)-Bizkaia 14 DdP No. : MRH1	
EN 1504-3 <b>BIKREPAR 5000-300ER</b> Product for structural repair of concrete with CPC (concrete polymer composite) mortar	
<b>Compressive strength:</b>	~ 30 MPa (Class R3)
<b>Chloride content:</b>	m0.05%
<b>Adhesion:</b>	~ 1.5 MPa
<b>Resistance to carbonation:</b>	Pass
<b>Capillary absorption:</b>	m0.5 kg/m <sup>2</sup> .min <sup>0.5</sup>
<b>Modulus of elasticity:</b>	~ 15 GPa
<b>Thermal compatibility: Part 1:</b>	~ 1.5 MPa
<b>Dangerous substances:</b>	In accordance with section 5.4
<b>Reaction against fire:</b>	Class A1

## Other technical characteristics

- **Appearance:** ..... Grey powder
- **Grain size:** ..... 0-2mm
- **Paste shelf life (at 20°C):**  
..... 30 minutes (depending on the weather conditions)
- **Bulk density of fresh mortar (UNE-EN 1015-6):**  
..... 1.9±0.1 (gr/cm³)
- **Water % (consistency of 175±10 mm UNE-EN 1015-3):** .  
..... 17-18%
- **Theoretical yield:**..... 1.7 kg/m² and mm of thickness.
- **Custom tariff** ..... 3824.50.90.00

## Usage instructions

### Preparation of the support

- The concrete support must be resistant and rough.
- Any remains of dust, weak or deteriorated material, oils, grease, paint, rust stains and any other contaminating substance in general must be removed using suitable techniques (brushing, steam pressure washer, etc.).
- If the concrete surface is smooth, it must be mechanically treated until the necessary roughness is achieved to improve the adherence. In some cases, bonding agents may need to be applied.
- Corroded reinforcements must be uncovered and all the rust must be removed, even from their back side. Finish by removing any remains using compressed air.
- Subsequently and on clean reinforcements, apply the corrosion protective primer while making sure that the entire surface of the reinforcement is covered.
- Upon completion of the preparation, the concrete support must be saturated with clean water and begin applying the mortar when said surface has acquired a matte appearance.

### Mixing and applying the product

- Mix the powder mortar with water (approximately 4,5-4,75 liters/sack), preferably using mechanical means (for example using a low speed electric mixer) until a pasty, lump free and homogeneous appearance is achieved.
- Apply the mortar and compact it tightly against the substrate and around the reinforcement.
- The minimum application thickness is 10 mm.
- In the case of excessive thicknesses we recommend applying consecutive coats at least 10 mm thick after the previously poured layer has hardened. To favour the adherence between layers, "scrape" the previous layer before applying the next rendering.
- At horizontal and vertical joints, widen the joint to an approximate thickness of 10 mm and remove any remains.

### Curing

- Like with any other cement based mortar, this product must be protected from early dehydration caused by the wind, direct sunlight, etc. Normal protective methods must be used such as wet sack cloths, polyethylene sheets or a suitable curing product.

- In cold weather the repaired surface must be protected from freezing temperatures.

## Supply

- In 20 and 24 m³ silos, which can be refilled at the work site using tank trucks.
- The silos may include spraying equipment for automatically and continuously elevating the product as needed for the work.
- In 25 kg paper sacks Palletized in 60 sacks/pallet (1500 Kg).
- The supply will follow the General Terms of the Contract that is in force.

## Storage

- In silos we guarantee that the characteristics of the product are maintained intact for two months from the manufacturing date.
- Storing in sacks guarantees that the characteristics of the product are maintained intact for 1 year from the manufacturing date, as long as they are kept in a location that is under cover and dry.

## Customer / technical service

- In case of doubt regarding the selection, use or application of the products, first consult with our Customer/Technical Service Department.
- If you need a specific product (by colour, grain size, resistance, usage, etc.), our Customer/Technical Service Department will help you determine your specific requirements and will provide the best solution for your needs.

## Remarks

- *Our technical advice, whether the advice is provided verbally or via tests, is provided according to the best of our knowledge but shall be considered only as a recommendation WITHOUT OBLIGATION. Since we are not involved in the execution of the works, the information is provided for general purposes and is not legally binding for BIKAIN.*
- *The technical sheet cannot include all the applications and factors involved with using a material. Therefore, regarding installations not described in this sheet, we recommend consulting with our technical department or carrying out a preliminary test to check the suitability of said application.*
- *The usage instructions are drafted based on our tests and knowledge and do not relieve the consumer from examining or checking the products are suitable for use. Therefore prior to using the product, whomever is going to use it must determine if it is suitable or not for the intended use, since he or she will assume any responsibility that may be derived from its use. The responsibility of BIKAIN shall be limited to the value of the used merchandise.*
- *BIKAIN, a registered company in accordance with Standard UNE-EN-ISO 9001 regarding quality systems, guarantees that its products have been controlled by its quality laboratory in accordance with the characteristics described in the Technical Sheets.*

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## MORTEROS Y REVOCOS BIKAIN, S.A.

Aldebarrena, 18 – 48212 Mañaria (Bizkaia)

+34 946 202 496

www.bikain.com

info@bikain.com

