



# BENFERCURE PLUS

High-resistance, anti-shrinkage fibre-reinforced, thixotropic cement mortar, for structural restoration of deteriorated concrete

- Repair of concrete columns
- Repair of under-surfaces of concrete balconies
- Repair and finishing of concrete walls with defects such as ballast nests and holes caused by spacers
- Repairs of concrete deteriorated by weather and the corrosion of steel reinforcement bars
- Repairs of concrete industrial ramps and floors
- Shaving of concrete screeds before the laying tiled floors
- Conforms to EN 1504-3 Class R3
- **CE**



**TECHNICAL FEATURES:** BENFERCURE PLUS is a cement mortar in powder composed of high-resistance concrete, selected gradation aggregate, synthetic resin, fibres and special additives. Its high-resistance formulation has been created and developed for the rapid and safe repair of horizontal and vertical concrete surfaces while at the same time restoring the mechanical resistance. It is easy to work and has a high thixotropy allowing application of coats up to 4 cm, even vertically. Once hardened, thanks to the excellent adhesion to the sub-base and the elasticity and water-resistance, it guarantees a long-life span even on surfaces subject to abrasion from intense traffic. BENFERCURE PLUS can be applied with a trowel or brush, even vertically, up to a maximum thickness of four centimetres per coat for two coats. The surfaces can be finished with a trowel while the mortar is setting or later with BENFERFINISH.

**CONTRACT ITEM SPECIFICATIONS:** Structural restoration of concrete elements through the manual or machine application of cementitious, thixotropic a one-component mortar, specific for concrete structures with guaranteed durability, as BENFERCURE PLUS by Benfer, equipped with CE mark and conforming to performance requirements requested by Norm EN 1504-3, Class R3, for repair and structural restoration of concrete.



TECHNICAL ASSISTANCE



INSURANCE GUARANTEE



TECHNICAL MEETINGS



PROFESSIONAL USE

#### **AREAS OF APPLICATION:**

- Repair of concrete columns
- Repair of under-surfaces of concrete balconies
- Repair and finishing of concrete walls with defects such as ballast nests and holes caused by spacers
- Repairs of concrete deteriorated by weather and the corrosion of steel reinforcement bars
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- Shaving of concrete screeds before the laying tiled floor

#### **METHODE OF USE:**

##### **SUBSTRATES PREPARATION:**

Do not use on smooth supports or painted supports and on gypsum-based surfaces. Do not use with thickness lower than 1 centimeter. Do not add other components and do not add water in the mixture after this starts to set. Do not use for anchorages and for repair by straining. Before the application remove the rust from structure irons not covered by brushing or sandblasting. Work the product exclusively with a temperature between +5°C and +30°C. the supports must be oil-free and free from grease and dust. Damaged, weakened parts or partially peeled off must be absolutely removed, better with sandblasting, until you obtain a solid and rough. Treat irons, previously sandblasted, with BENFERCURE FERRI before proceeding with restoration with BENFERCURE PLUS. To facilitate the adhesion of the product, wet abundantly the substrate, avoiding to apply the mortar directly on standing water.

##### **MIXTURE PREPARATION:**

Mix BENFERCURE PLUS for 2 minutes with 18 % of clean water (4,5 lt for bag), by using a cement mixer or mechanic mixer with low revolutions, adding accurately the powder into the water, not the opposite. Verify when the dough is homogeneous and free from any lump, then mix again for 2/3 minutes. The product is ready to use and you work it for about one hour at a temperature of 20°C. BENFERCURE PLUS can be applied also with spray. In this case mix the powder with 4,6 - 4,8 lt of water for a bag of 25 kg.

##### **Prepare the mortar for application with a machine:**

The preparation can be done with the use of plaster machine with continuous mixing.

Pour the content of the bags inside the hopper and fix the flow-meter to obtain a compact and plastic mortar.

##### **PRODUCT APPLICATION:**

For applications with higher thickness of 2 centimeters, it is necessary to roughen the surface of concrete and place a proper armor. BENFERCURE PLUS can be applied with a trowel or a spatula, even in vertical position, in minimum thickness of 4 cm for every coat, for a maximum of 2 coats. Where necessary it is possible to apply a second coat of BENFERCURE PLUS, as soon as the first coat becomes solid, but avoiding to wait for more than 3 hours. With high temperatures protect BENFERCURE PLUS from a rapid drying, for at least 24 hours, moisten it nebulizing water. The finish of the surface can be carried out with trowel within the time of setting of the mortar or in a second moment with BENFERFINISH.

**CLEANING:** The cleaning of the tools must be done with water before the product starts hardening.

**CONSUMPTION:** 1,9 kg/m<sup>2</sup> thickness.

**PACKAGING:** BENFERCURE PLUS viene confezionato in sacchi di carta politenata da 25 kg e fornito in pallets da 1.250 kg.

**STORAGE:** In the original closed package, in a cool dry place.

**SHELF LIFE:** 12 months.

#### PRODUCT TECHNICAL DATA

Aspect:	Grey powder
Storage:	12 months, in the original closed package in a cool dry place
Toxicity:	Irritant. Possible irritation of skin and eyes after contact, due to the cement content
Inflammability:	No
Apparent mass volume:	1,25 kg/dm <sup>3</sup>
Maximum grain size:	1 mm
Mix ratio:	18% water equivalent to 4,5 lt of water per 25 kg bag
Mixing time:	2-3 min (drilling machine min. 300 - 500 r/min)
Mixture consistency:	Thixotropic mortar
Mass volume:	2,0 kg/dm <sup>3</sup>
Paste pH:	12
Application temperature:	From + 5°C to + 35°C
Spreading:	140-160 mm
Max.min. thickness:	From 10 to 40 mm
Final hardening:	28 days
Resistance to temperature:	From - 30° C to + 90° C * at 23°C and 50% relative humidity

N.B. The information given in this chart is based on our best experience and indicative only. It must in any event be verified by the end user, who assumes all liabilities deriving from utilization of the product.