

Repar Tix HG SB

Structural, thixotropic, fibre-reinforced cement mortar, for spritz beton



Thixotropic, structural, fibre reinforced cement mortar, with compensated shrinkage, with high intrinsic water tightness, and extraordinary physical and mechanical characteristics: adhesion, compression resistance, flexural strength, abrasion resistance, etc. Perfect for remediation of structural works and articles in degraded concrete and very high-performance coatings. Repar Tix HG SB, in addition to normal manual application techniques, it is a structural mortar specially formulated for applications with pumping/spray machines (wet spritz-beton technique). Particularly optimized parameters are: rheology, thixotropy and workability of the product, which allow spraying operations with reduced wear of the mechanical parts and little waste on the ground.

CUSTOMS CODE: 3824 5090

COMPONENTS: Single-component

APPEARANCE: Powder

AVAILABLE COLORS: Gray

PACKAGING AND DIMENSIONS: Bag 25 kg - Pallet: 50 x (Bag 25 kg)

OBTAINED CERTIFICATIONS AND REGULATIONS



FEATURES AND BENEFITS

Rheoplastic, thixotropic, structural, composite cement mortar, based on special cements and selected siliceous aggregates, reinforced with a balanced mixture of READY MESH polypropylene fibres and calcium metasilicate microfibres, added with specific agents and a high content of silica fume. After hardening, it provides very high performance in terms of intrinsic water tightness, resistance to washing and hydrolysing, mechanical strength, abrasion and cavitation, anti-carbonation, chemical-physical stability, resistance to harsh atmospheric agents and to leaching water. It has three-dimensional fibre-reinforcement, provides high hold; it is dimensionally stable (compensated shrinkage). The product can be supplied in mono-component or two-component version. The product, in the monocomponent version, is mixed with water (approx. 16% of the weight of the bag). In the two-component version, the product is mixed by adding the 4.5 kg of component B. The two-component version increases adhesion to the support and reduces free shrinkage to air, especially in the initial hardening phases and in particularly hot climates, without modifying the physical-mechanical characteristics of the end product.

FIELDS OF APPLICATION

Repairs and protective coatings of hydraulic works (pipelines, dams, tunnels etc.), marine structures and artefacts in critical situations: aggressive chemical-physical agents, leaching water, marine atmosphere, etc. Specific for shotcrete interventions in galleries, tunnels, rock walls, irrigation and hydraulic channels, piles and micropiles, diaphragms, etc.

ALLOWED SUPPORTS

Concrete - Prefabricated concrete - Bricks - Mixed walls (bricks and stones) - Stone walls - Rock walls



PREPARATION OF SUPPORTS

Application surfaces should be clean, free of soiling, crumbling and non-adhering parts, dust, etc., conveniently saturated with water until they reach the condition "saturated with dry surface". An adequate roughening of the surfaces by scarifying, sandblasting etc. is always necessary in order to obtain the maximum adhesion values to the substrate. The optimal values are obtained with high pressure hydro-scarification. Bare the irons undergoing disruptive oxidation or deeply oxidized, removing the rust of the exposed irons (by sandblasting or abrasive brushes).

MODE OF USE

The use of pumping/spraying machines specifically designed to be used with fibre-reinforced structural mortars is recommended. For the spraying of structural mortars such as Repar Tix HG SB, an effective and sometimes prolonged mixing of the product, which must take place upstream of the pumping circuit, is always recommended. For this reason, the use of "plaster sprayers" with volumetric water dosage is not recommended. Pour about 2/3 of the mixing water into the mixer, add Repar Tix HG SB and the remaining water; continue to mix until a homogeneous lump-free mixture is obtained. The mixing water should be about 16% of the weight of the bag. Addition of Bond HG to the mixing water, (approx. 0.5 litres per 25kg bag of product) in the single component version, allows further improvement in terms of adhesion, hold, impermeability, workability, modelling and deformation capacity. In the case of use of the product in the two-component version, pour component B (liquid) into the mixer, gradually adding component A (powder) and mixing until the lumps are completely eliminated. For high coating thicknesses, static requirements, monolithic requirements, etc., performed with Repar Tix HG SB, it is advisable to use suitable metal reinforcements (electro-welded mesh, cages, etc.), anchored to the support with Syntech Profix, GROUT MICROJ, Repar Tix G2.

APPLICATION METHODS

Brick trowel - Finishing trowel - Spatula - Sprayer

TOOL CLEANING

Water

KEY FEATURES

- | | |
|--|---|
|  Highlighted product |  Max. recommended thickness: 40 mm |
|  Maximum diameter of aggregate: 1.5 mm |  Min. recommended thickness: 7 mm |
|  Mix with water: 16 % |  Nonflammable |
|  Pot-life: > 40 min |  Shelf-life: 12 months |
|  Temperature of use: +5 / +32 °C |  Use wearing protective gloves |



TECHNICAL SPECIFICATIONS

UNI EN 12190

Compressive strength after 1 day > **22 N/mm²**

UNI EN 12190

Compressive strength after 28 days \geq **55 N/mm²**

UNI EN 196/1

Flexural strength at 1 day **5.0 N/mm²**

UNI EN 196/1

Flexural strength after 28 days \geq **8.5 N/mm²**

UNI EN 13036-4

Skid resistance **61.0 mm**

< **70 $\mu\text{g}/\text{m}^3$**

UNI EN 13057

Capillary absorption **0.30 $\text{kg}\cdot\text{h}^{-0.5}/\text{m}^2$**

UNI EN 1015-17

Chloride content < **0.01 %**

EN 13142

Static elastic modulus **26000 N/mm²**

EN 13501-1

Reaction to fire **A1**

UNI EN 12190

Compressive strength after 7 days > **40 N/mm²**

UNI EN 12190

Compressive strength after 90 days > **60 N/mm²**

UNI EN 196/1

Flexural strength after 7 days > **7 N/mm²**

UNI EN 13295

Resistance to carbonatation **0.5 mm**

UNI EN 1015-12

Bonding force \geq **2 N/mm²**

UNI EN 1015-6

Density **2160 kg/m^3**

pH > **12**

UNI EN 13687-1

Determination of thermal compatibility \geq **2 N/mm²**

UNI 8147

Contrasted expansion with air curing for 1 day > **0.01 %**

Water/binder ratio < **0.37**

CONSUMPTION

Approximately 18,5 kg/m² of Repar Tix HG SB for every centimetre of thickness to be implemented (approximately 1850 kg per cubic metre).

STORAGE AND CONSERVATION

Store the product in its original packing, in a fresh and dry environment, avoiding frost and direct sunlight. Inadequate storage of the product may result in a loss of rheological performance. Protect from humidity.

PHOTO GALLERY



ADDITIONAL CONTENT



WARNINGS AND PRECAUTIONS

The general information, along with any instructions and recommendations for use of this product, including in this data sheet and eventually provided verbally or in writing, correspond to the present state of our scientific and practical knowledge. Any technical and performance data reported is the result of laboratory tests conducted in a controlled environment and thus may be subject to modification in relation to the actual conditions of implementation.

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