



BI MORTAR CONCRETE SEAL

PRODUCT DESCRIPTION

BI MORTAR CONCRETE SEAL is a brush-applicable cement-based waterproofing product suitable for both negative and positive hydrostatic pressure. This creates a continuous coating that is particularly resistant to impact and abrasion.



PRODUCT APPLICATION

- Rigid waterproofing of concrete or masonry surfaces, under or above ground, such as basins, pools, channels, foundation walls, cellars and elevator pits

ADVANTAGES

- Usable with negative and positive hydrostatic pressure
- Suitable for both indoor and outdoor application
- Excellent impermeability performance
- Particularly resistant to abrasion and impact
- Simple and quick brush application, excellent workability
- Suitable for continuous contact with water
- Easy maintenance, also in conditions of high humidity and closed environments

PREPARATION AND APPLICATION Preparing the surfaces

Verify the structure suitability for the hydrostatic loads; if intended to contain water, perform a preload test.

Clean all traces of form oil or grease and remove any loose parts (fouling).

High-pressure clean the surface until it is soaked and remove excess water before applying the product. Repair the surface with suitable Volteco mortar if the surfaces are very uneven or in the case of mixed masonry.

Seal any localised water flows with TAP 3/I-PLUG rapid-setting hydraulic mortar.

Preparation of elements of discontinuity on the surfaces (positive hydrostatic pressure)

- **CONSTRUCTION JOINTS** Connect the construction joints between the bed and the vertical wall by forming a 3x3 cm fillet with SPIDY 15 rapid-setting mortar
- **SPACERS** Remove the spacers on both sides of the wall and plaster with SPIDY 15 rapid-setting mortar
- **PASSING BODIES** Seal all the passing bodies, including spacers and pipes, with AKTI-VO 201 mastic (see related technical data sheet)
- **JOINTS, CRACKS AND EDGES** Connect all joints, significant cracks with GARVO or BI FLEX joint cover strip, as well as the horizontal and vertical edges (including where the fillet is) if WT 102 bentonite waterstop has not been used

Contact the Volteco Technical Service before intervening on the expansion joints.



BI MORTAR CONCRETE SEAL

Preparation of elements of discontinuity on the surfaces (negative hydrostatic pressure)

- WATER FLOWS Seal any water inflow with TAP 3/I-PLUG quick-setting mortar (see the related technical data sheet)
- CONSTRUCTION JOINTS AND CRACKS Seal the construction joints and cracks with AKTI-VO 201 mastic and/or BI FLEX system (see the relative technical data sheets)
- PASSING BODIES Seal all the passing bodies, including spacers and pipes, with AKTI-VO 201 mastic (see related technical data sheet)
- JOINTS Contact the Volteco Technical Service before intervening on the expansion joints

Preparing the mixture

Pour the mixing water into a container (approx. 5,6 l per bag equivalent to 28% in weight) and slowly add the powder, mixing it with a drill-mixer for about 3 minutes, until a fluid and smooth mixture is obtained.

Application

Dampen the surface until it no longer absorbs any more.

With highly absorbent substrates, keep the surface wet until BI MORTAR CONCRETE SEAL is applied.

Apply two coats of BI MORTAR CONCRETE SEAL with brush or special Volteco brush.

The first coat must cover every irregularity evenly and fill the superficial pores.

If the brush tends to drag the product, dampen the surface more.

The second coat needs to be applied when the first is sufficiently hard, normally the day after but nevertheless no sooner than 8 hours.

Dampen the surfaces and apply the second layer taking care to create uniformity of the waterproof layer.

Curing

When waterproofing foundation walls, let it cure for at least 24 hours after application before backfilling.

When coating the waterproofing with any type of protective layer or finish (ceramic coating, protective screed, plaster, cement-based levelling compound, plastic drainage, etc.), let it cure at least 3 days after application.

When waterproofing structures intended to contain water, allow a curing phase of at least 7 days once the product is applied.

The curing times can be longer in the presence of a low temperature, high humidity or premature contact with water.

Finishing

When applied indoors, it is recommended to coat the walls with the CALIBRO system as an anti-condensation layer, on top of which an X-LIME finish is possible.



References available at www.volteco.com

CONSUMPTION AND YIELD

2.5÷3 kg/m² depending on the irregularity and roughness of the surface.
A bag of BI MORTAR CONCRETE SEAL waterproofs an area of 8÷10 m².

PACKAGING AND STORAGE

20 kg bags.
The products must be stored in a dry place protected from sun and humidity.

WARNINGS - IMPORTANT NOTES

The product must be used within 20 minutes after mixing.

Do not add water to extend the pot life.

Do not apply BI MORTAR CONCRETE SEAL if the temperature is lower than +5°C or if it is expected to drop below 0°C within 24 hours.

Prevent BI MORTAR CONCRETE SEAL from exposure to wind or high temperatures during solidification; in such cases, keep the surface damp until it hardens.

Significant condensation may occur in environments with poor ventilation or high humidity.

PHYSICAL AND TECHNICAL SPECIFICATIONS



Specification	Values
Appearance	grey powder
Specific weight	> 1.85 kg/l
Workability time at +20 °C and 60% RH	20'

Specification	Test method	Performance requirements;UNI EN 1504-2	Declared performance	Certified performance (**)
Bond strength	UNI EN 1542	≥ 1 MPa	≥ 1 MPa	2.65 MPa
Permeability to water	UNI EN 1062-3	≤ 0.1 kg*m ⁻² *h ^{-0.5}	< 0.1 kg*m ⁻² *h ^{-0.5}	0.002 kg*m ⁻² *h ^{-0.5}
Water vapour permeability (equivalent thickness: Sd)	UNI EN 7783-2	Class 1: Sd ≤ 5 m	-	SD = 1.06 m
Compression strength	UNI EN 12190	Not required	> 10 Mpa (1 day) >25 Mpa (7 days) > 30 Mpa (28 days)	-
Fire resistance	UNI EN 13501-1	Classification	-	Class A1

The quoted data are obtained in a laboratory at +20 °C and 60% RH.

Specification	Certifying body	Test method	Certified performance (**)
Impermeability in negative pressure (concrete structure Water/Concrete: 0.7)	IMM SA (Switzerland)	UNI EN 12390-8	9 Bar: no passage

SAFETY This is a non-toxic alkaline product.
It is recommended to use a mask and gloves while working.
In case of accidental contact with skin or eyes, wash thoroughly with water and consult a doctor.

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17 0028-CPR-2017/02/15 1370-CPR-1299 EN 1504-2:2005 BI MORTAR CONCRETE SEAL Protection systems of the concrete surface: Moisture content control (MC) and increased resistivity (IR) coating	
Reaction to fire: Class A1 Water vapour permeability: Class I Capillary absorption and permeability to water: < 0.1 kg*m ⁻² *h ^{-0.5} Adhesion: ≥ 1 N/mm ² Thermal compatibility: • Part 1: Un/freezing cycles: NPD • Part 2: Thunderstorm cycles (thermal shock): NPD • Part 3: Thermal cycles without immersion in de-icing salt: NPD Crack bridging properties: NPD Performance after exposure to the action of artificial atmospheric agents: NPD Methods of conditioning before testing (7 days at 70°C): NPD Linear shrinkage: NPD Coefficient of thermal expansion: NPD Cross cut: NPD Slip resistance: NPD Antistatic behavior: NPD Adhesion on wet concrete: NPD Hazardous substances: See SDS	

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