



BI MORTAR CONCRETE SEAL



WATERPROOF MORTARS - RAPID-SETTING MORTARS



PRODUCT DESCRIPTION

BI MORTAR CONCRETE SEAL is a crystalline cross-linking cement-based waterproofing product. This creates a continuous coating that prevents the penetration of water even with negative pressure (9 Bar), particularly resistant to impact and abrasion.

PRODUCT APPLICATION

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

ADVANTAGES

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

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 (see relevant technical data sheets) 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 (see relevant technical data sheets).

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

- **CONSTRUCTION JOINTS** Fill the construction joint between the bed and vertical wall by executing a 3x3 cm fillet with SPIDY 15 quick mortar (see relevant technical data sheet). Horizontal and vertical joints, if WT gaskets were not used (see relevant technical data sheet) must be sealed by means of BI FLEX System (see relevant technical data sheet).
- **SPACERS** Remove the spacers on both sides of the wall and plaster with SPIDY 15 rapid-setting mortar
- **PENETRATIONS** Seal all penetrations, including spacers and pipes, with AKTI-VO 201 mastic (see related technical data sheet)
- **JOINTS, CRACKS AND EDGES** Use BI FLEX System to fill all joints, marked cracks as well as the horizontal and vertical edges (including where the fillet is) if WT gaskets have not been used.

Preparation of elements of discontinuity on the surface (negative hydrostatic pressure and for all cases of water retaining structures)

- **WATER FLOWS** Seal any water inflow with TAP 3/I-PLUG quick-setting mortar
- **CONSTRUCTION JOINTS** Seal all construction joints with BI FLEX System
- **CRACKS** Seal cracks by means of AKTI-VO 201 mastic and/or BI FLEX System
- **PENETRATIONS** Seal all penetrations, including spacers and pipes, with AKTI-VO 201 mastic
- **JOINTS** Seal all structural joints with BI FLEX System

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 BI MORTAR CONCRETE SEAL in two coats with a brush, Volteco ROLLER, Volteco BRUSH or metal spatula.

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

If the brush/large 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.

Sprayed application

The product can also be applied with a plastering machine with levelling wands after separately mixing the product (for more information contact the Volteco Technical Service).

Curing

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

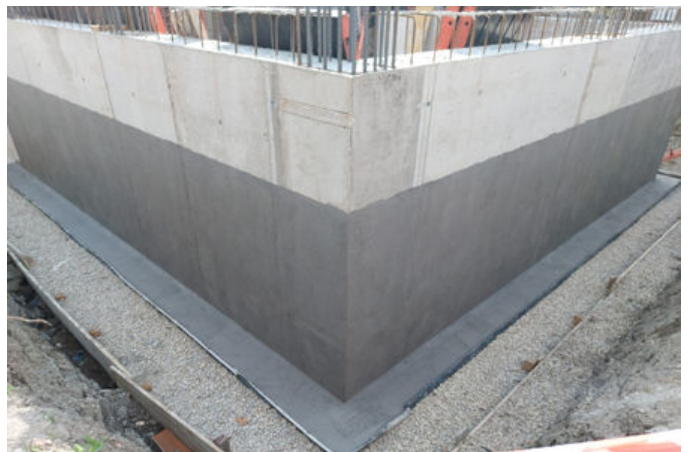
When coating the waterproofing with any type of protective layer or finish (ceramic coating, protective screed, plaster, cement-based levelling compound, plastic drainage, etc.), let it cure at least 3 days after application.

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 (see relevant technical data sheet) as an anti-condensation layer, on top of which an X-LIME (see relevant technical data sheet) 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 area protected from sunlight, humidity and from temperatures below 5 °C.

BI MORTAR CONCRETE SEAL in the original packaging has a storage time of 18 months

WARNINGS - IMPORTANT NOTES

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.

The preparation and installation data refer to normal environmental conditions (temperature +20 °C; relative humidity 60%).

PHYSICAL AND TECHNICAL SPECIFICATIONS

Specification	Values
Appearance	grey powder
Mixture consistency	Fluid
Application temperature	from +5 °C to +30 °C
Workability time at +20 °C	20'
Maximum aggregate size	1 mm
Specific weight	> 1.85 kg/l
Mixture ratio	100 parts powder 28 parts liquid

Feature	Test method	Performance requirements;UNI EN 1504-2	Declared performance	Certified performance (**)
Bond strength	UNI EN 1542	≥ 1 MPa	≥ 1 MPa	2.65 MPa
Capillary absorption	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)	-

Feature	Test method	Performance requirements;UNI EN 1504-2	Declared performance	Certified performance (**)
Fire resistance	UNI EN 13501-1	Classification	-	Class A1

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

Feature	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
Resistance to severe chemical attack	SOCOTEC ITALIA SRL	UNI EN 13529	Reduction in hardness (Shore D): < 2%

WATCH VIDEOS AND INSIGHTS

Safety Data Sheets

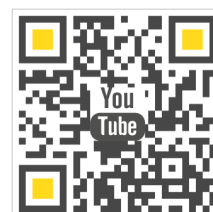
Declaration of performance

Specifications

Technical drawings and BIM

EPD Declaration

YouTube Video



SAFETY

Refer to the related Safety Data Sheet.

 1381	VOLTECO S.p.a Via delle Industrie, 47 - 31050 Ponzano Veneto (I)
17 DOP 0028 EN 1504-2:2005 1381-CPR-1160 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: <math>< 0.1 \text{ kg} \cdot \text{m}^{-2} \cdot \text{h}^{-0.5}</math> Adhesion: $\geq 1 \text{ N/mm}^2$ 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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