



WATERBLOCK®

Brushable sealing slurry

Properties

WATERBLOCK is an inorganic brushable waterproofing mortar in powder form, which is simply mixed with water. It contains cement, silicate aggregates and chemical additives, creating waterproofing compounds of calcium and significantly improves bonding and workability.

- After hardening, **WATERBLOCK** creates a totally rigid and waterproofing coating. If for any reason the substrate is expected to create cracks, **WATERBLOCK** must be elastified by using **VIMAFLEX**, which is a liquid elastifying agent for mortars.
- Totally suitable for constant contact with water
- Offers limitless protection from water, because it is an inorganic material that does not age.
- The layer that it forms is total waterproofing against hydrostatic pressure, in accordance with DIN 1048
- Although water impermeable, it is vapour permeable, allowing the building elements to breathe.
- Suitable for potable water tanks, because it does not contain toxic substances.

Applications

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- Basements – water tanks – swimming pools – drains – flower stands – terrace gardens – sewage pits – biological treatment tanks – tunnels – damp places in general (under tiles).
- Ideal for waterproofing in cases of simple dampness and even water under pressure.
- Can be used for waterproofing basements on the internal side (also at a later stage), because it can withstand **negative pressures** of water due to high bonding to substrate.

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- Suitable for waterproofing external walls when applied under the plaster (e.g. near the ground surface).
- In combination with the elastifying agent **VIMAFLEX** and fiberglass mesh or chapped mat as reinforcement it can be applied for waterproofing terraces either covered (in grey color) or exposed to the sun (in white color).

Technical Data

In accordance with the report issued by the Institute of Compact Constructions and Technology of Building Materials, University of Karlsruhe (TH).

Bulk density of dry mortar 1.31 kg/l

Fresh mortar **Porosity:** 8.4% of volume (DIN 1015-7)
Effect weight: 1.84 kg/l (DIN 1015-6)
Adhesion: modulus of expansion = 21.0 cm (DIN 1015-3)

Hardened mortar **Effect weight:** 1.9 kg/l
after 7 days, with constant **Compressive strength:** 20.4 N/mm² (DIN EN 196-1)
presence of water **Tensile strength in flexure:** 5.2 N/mm² (DIN 196-1)

Water permeability Test was carried out in accordance with DIN 1048-5 under pressure of 1.5 bar (15 m water column) for 28 days; no moisture was observed in the substrate plate concrete (average thickness of waterproofing mortar: 2.8 mm)

Bonding strength 1.6 N/mm² (in accordance with DIN EN 1348)

Vapour permeability There was adhesion rupture in the waterproofing mortar*
Water vapour diffusion resistance coefficient : 58.3 g/m²· 24h (DIN EN ISO 7783-1 replacing DIN 52615)

Equivalent air thickness $\mu = 63$

For mortar coating $sd = \mu \cdot s = 0.27 \text{ m}$
s=4,2 mm:

Suitability for contact with potable water: **WATERBLOCK** is suitable for use in potable water tanks, in accordance with the respective report issued by the Laboratory of Analytical Chemistry, Aristotle University of Thessaloniki.

***WATERBLOCK's** bonding in concrete overrules its own strength: by this way handling of high negative water pressures is achieved.

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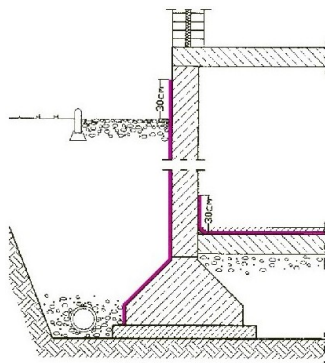


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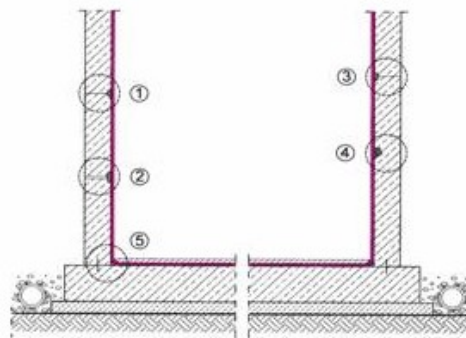
Preparation of substrate

1. Clean surface of any wooden formwork oil remains, loose materials, old plaster remains, dust, etc.
2. Seal any water leakage points, using the fast-setting **WATERFIX** cement.
3. Fill and smoothen the cavities in concrete ⑤ using cement mortar mixed with the polymer latex **VIRESIN**, after removing any loose flakes and wetting the surface. Alternatively, you can use the ready-mixed resin improved cement mortar **VIMACRET**, which is simply mixed with water.
4. Cut out wooden murel ③ and pins ② around 3 cm into the concrete and fill the craters in the above-mentioned way. Follow the same procedure for the construction joints ④.
5. Curl the corners where the floor meets the wall ⑥ with cement mortar reinforced with **VIRESIN** or the ready-mixed cement mortar **VIMACRET** (formation of pipes).
6. In masonry or stonework, first apply a layer of cement mortar reinforced with **VIRESIN**.
7. For waterproofing of basements in old buildings carried out at a later stage, remove the existing plaster 50-60 cm above the level of the water and then follow the above instructions.
8. If the substrate is not wet, wet well avoiding any excess water.
9. Do not use **WATERBLOCK** in temperatures below +5° C (air and substrate).

INTERNAL WATERPROOFING



EXTERNAL WATERPROOFING



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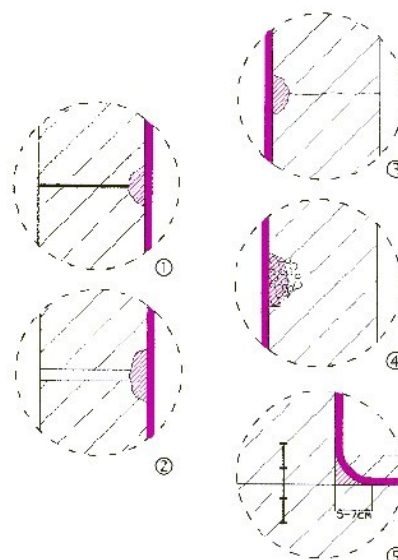


Filling of 1, 2, 3, 4 with cement mortar consisting of:

1 part cement by volume
2 parts sand by volume
0.3 part **VIRE SIN** by volume
or with the ready-mixed resin improved cement mortar **VIMACRET**.

Forming of 5 using cement mortar consisting of:

1 part cement by volume
2.5 parts sand by volume
0.25 parts **VIRE SIN** by volume
or with the ready-mixed resin improved cement mortar **VIMACRET**



How to use

Add **WATERBLOCK** slowly into the water continuing to stir until you create a uniform pulp that can be applied with a brush. After 5 minutes (the 'curing' time of fresh mortar), stir the mixture again and it will be ready for use.

Recommended mixing ratio:

WATERBLOCK grey	water	WATERBLOCK white	water
2,7 parts by volume	1 part by volume	2,5 parts by volume	1 part by volume
1 bag (25 kg)	7 kg (28%)	1 bag (25 kg)	≥9 kg (36%)

Overall, you will need 2-5 coatings, consumption: around 1 kg per coat (thickness: 0.5mm). Higher thickness per coat will produce cracking caused by setting shrinkage. Make sure that the coat has dried before applying a new one.

WATERBLOCK can be also applied by using a spatula, with a small decrease of mixing water in order to achieve the proper workability.

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Consumption

For ground moisture	2 kg/m ²	two coats	minimum thickness 1.0 mm
For water without pressure (remains of rain water)	3 kg/m ²	three coats	minimum thickness 1.5 mm
Water under pressure Level of water table Up to 1 m	4 kg/m ²	four coats	minimum thickness 2.0 mm
More than 1 m	5 kg/m ²	five coats	minimum thickness 2.5 mm

WATERBLOCK Elastification

If capillary cracks appear or are expected to appear on the waterproofed surface, you must elastify **WATERBLOCK** in order to bridge the slight shifts of cracks without creating fissures (maximum permissible width of cracks 0.2 mm). This can be achieved by using the elastifier **VIMAFLEX**, an elastomeric emulsion that is mixed with **WATERBLOCK** as follows:

1.5 parts **WATERBLOCK** by volume: 1 part **VIMAFLEX** by volume
or 2.0 parts **WATERBLOCK** by weight: 1 part **VIMAFLEX** by weight
When high elasticity is not required, **VIMAFLEX** can be added in smaller amounts. In this case you can dilute **VIMAFLEX** with water up to a ratio of 1 part by volume **VIMAFLEX** : 1 part by volume water

Protection

A freshly coated surface must be protected from exposure to high temperatures or wind (danger of dehydration), rain or frost. In addition, you must make sure that the hardened coat of **WATERBLOCK** is protected as its small thickness makes it vulnerable to mechanical stress: for example, in walkable floors the waterproofed surface must be protected by a cement mortar layer.

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Note

Water pressure on the surface treated with **WATERBLOCK** can be applied at least after three days in cases of positive pressure and until seven days in cases of negative pressure, when **WATERBLOCK** will have obtained the required strengths.

Static Adequacy of Bearing Elements

- In cases of water under pressure, the waterproofing coat bearing element (wall, floor, etc.) should be properly assessed regarding its static suitability for water pressure and lift.

Cleaning

- Tools should be cleaned before getting dry.

Storing

- Store **WATERBLOCK** in a dry place protected from dampness, in sealed bags for at least 12 months.

Packaging

- **WATERBLOCK** is available in grey and white color, in 25 kg bags.

Protection

- The product contains cement and it is considered irritant due to alkali reaction to water.

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