BKM HZ125

Hydrophobic masonry injection in the low-pressure method
technical data sheet

Art.-No.: P-001-123 25 Litre Canister
Art.-No.: P-001-122 200l Barrel
Art.-No.: P-001-121 1.000l IBC

Product description

For injection into mineral masonry for the purpose of creating a horizontal as well as surface injection barrier against rising damp and transverse moisture penetration above backwater levels in accordance with WTA Leaflet E-4-10 “Injection methods with certified injection substances
against capillary water transport”.

Product advantages

- Ready to use mixture
- Not water dilutable
- Low consumption
- Hydrophobic
- Suitable for moisture penetration up to 99.9
- High self-distribution in masonry

Specification

Density acc. to DIN 51757:	0,8 g/cm³
pH value:	neutral, alkali-free
Smell:	neutral
Appearance:	colorless
Injection pressure:	0,5 – 6 bar
Processing temperature:	minimal 3°C

Application areas

BKM HZ125 can be used for the following masonries:

- Brick and clinker masonry
- Natural stone / quarry stone masonry
- Sandstone masonry
- Sand-lime brick and aerated concrete
- Lattice and hollow bricks
- Rammed concrete

Product application

Horizontal barrier against rising damp

In the absence of a horizontal barrier, moisture from the soil is drawn upwards via the capillaries of the masonry. Injection with BKM HZ125 effectively and above all sustainably interrupts this process. A row of boreholes is drilled into the masonry at intervals of 12.5 cm at the desired blocking height (approx. 5-15 cm above the top of the floor or above the ground) at an angle of 30-50°.

In the area of masonry corners, two holes are drilled directly into a corner, the respective first hole to the sides has a distance of 10cm. (**Fig. 1**)

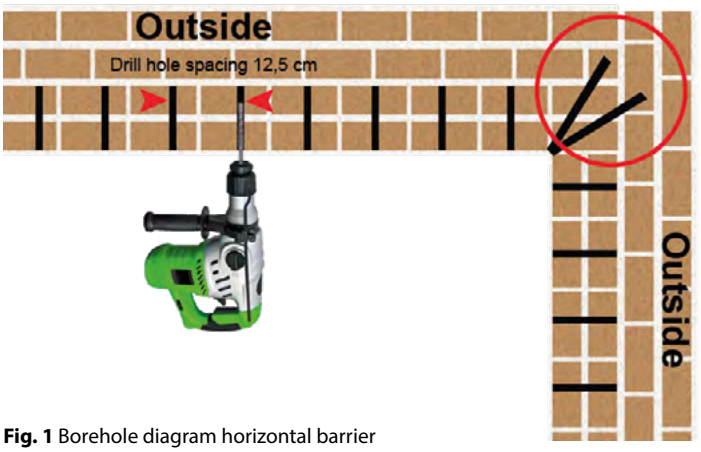

Fig. 1 Borehole diagram horizontal barrier

The borehole depth is half the wall thickness; for wall thicknesses over 60 cm, the borehole depth is approx. 2/3 of the respective wall thickness.

The BKM HZ125 is then injected via an injection system, optimally with an electronic flow meter, using the low-pressure injection method via packers or lances.

Surface barrier against transverse moisture penetration

In the case of areas with a partial basement or built-over exterior walls where excavation is not possible, the leaking wall is sealed from the inside against external transverse moisture penetration using BKM HZ125.

For this purpose, BKM HZ125 is injected into the entire body of the wall, thus forming a barrier over the entire surface of the masonry. (**Fig. 2**).

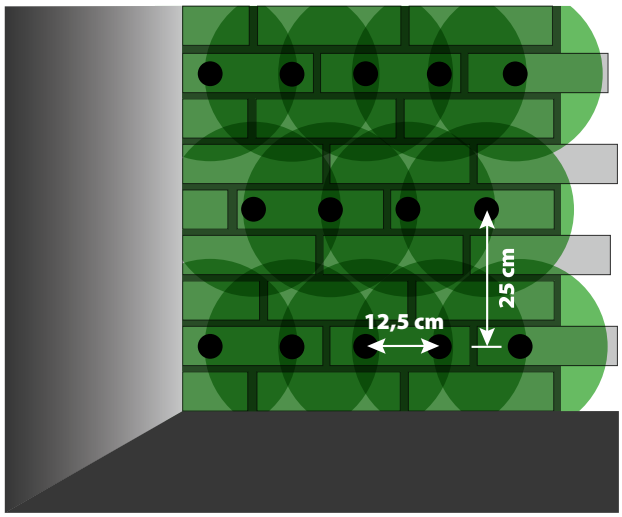

Fig. 2 Borehole diagram surface barrier

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The boreholes are drilled at a distance of 12,5 cm, the other rows of boreholes are arranged one above the other at a distance of 25 cm and staggered like a chessboard. The last row of boreholes ends approx. 15 cm above ground level.
The corner areas must also be sufficiently supplied with BKM HZ125 through additional boreholes. Surface barriers can also be applied partially; in this case the barrier is applied on all sides up to approx. 50 cm beyond the last recognisable point of damage.

Surface sealing against capillary transverse moisture penetration in hollow brick masonry is only possible with continuous and intact bearing joints or with capped hollow bricks.
This must be checked before starting the waterproofing work. If this cannot be determined perfectly, a functioning surface sealing cannot be guaranteed.

Further areas of application
Concrete/ natural and quarry stone
Blocks in concrete (tamped concrete) and in natural/quarry stone are possible with the following restrictions:
- Halved drill hole spacing of 12.5cm.
- Material input per borehole 1/2 of the normal quantity

In the case of natural stone masonry, the drill hole must be positioned in the stone so that the bearing joint or a cavity is hit on half of the masonry.

Grid and hollow chamber stones
BKM HZ125 spreads without pressure in the masonry due to its extraordinarily high creep capacity. It is therefore not necessary to fill hollow spaces or chambers in the masonry with suspensions beforehand. Injection into hollow bricks is carried out in the upper third of the brick with the aim of accumulating BKM HZ125 Pro in the cavity. Distribution then takes place via the joint material.

Consumption
The consumption depends exclusively on the wall thickness, not on the type of masonry. The following formula is used for a simple calculation of consumption:

10 x Wall thickness in cm = Consumption in ml per borehole (Drill hole spacing from 12,5 cm)
Example: 10 x 24 cm = ca. 240 ml per borehole.

BKM HZ125 Material requirement per borehole	
Wall thickness in cm	**Material required in ml**
12	120
24	240
36	360
50	500
60	600
70	700
80	800
90	900
100	1000

Comments
Drying duration
The drying time of the masonry until the equilibrium moisture content is reached depends on the moisture penetration as well as additional good ventilation of the entire room.
Drying equipment may only be used after the reaction time of min. 3 weeks.
Damaged plasters and paints must be removed after injection and replaced with plasters from the BKM.MANNESMANN Restoration Plaster System. Paint coats are to be applied exclusively with diffusion-open silicate paint.

Working tools
- Hammer drill
- Hammer drill 14mm with 4 cutting head
- BKM.MANNESMANN Profi-Press injection pump
- Injection lances
- Cleaning station with accessories
- Special cleaner HP-R

Details on handling and cleaning the Profi-Press injection pump can be found in the "Profi-Press" technical data sheet.

Delivery, storage
Frost-free storage. In unopened original containers, the shelf life is 12 months from the date of manufacture. The product reacts with humidity. Opened containers must not be in contact with air or water for a longer period of time.

Ecology, safety, disposal
Surfaces that are not to be treated must be covered before starting the procedure. Natural stone (e.g., granite or marble) should be protected from contact with BKM HZ125 to prevent color deepening. We recommend wearing safety goggles and gloves during application.
For further information on occupational safety, transport, ecology, and disposal, please refer to the current safety data sheet.

Legal notice
The above information, in particular the suggestions for processing and use of our products, are based on our knowledge and experience under normal circumstances, provided that the products have been stored and applied correctly. Due to the different materials, substrates and divergent working conditions, a guarantee of a working result or a liability, regardless of the legal relationship, cannot be justified on the basis of these instructions or verbal advice, unless we are accused of intent or gross negligence in this respect. In this respect, the user must prove that all knowledge necessary for a proper and promising assessment by BKM was provided to BKM in writing, in time and in full. The user must check the suitability of the products for the intended application. We reserve the right to make changes to product specifications.
Possible interactions with non-mineral wall components cannot be ruled out and do not constitute grounds for complaint.
We recommend carrying out a test injection before application.
Proprietary rights of third parties must be respected.
The latest product data sheet applies and must be requested from us. The responsibility for the successful application of our products lies with the user, as the use is beyond our control. However, we ensure the quality of our products in accordance with our conditions of sale and delivery, without guaranteeing the success of their application. Our data sheets represent advice based on our best knowledge, but no obligation can be derived from them. Our written consent is required to guarantee properties and application possibilities that go beyond the information recorded in the data sheets.
Further information can be found at:
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