BKM MANNESMANN
Products keeping buildings dry.

# Novusan

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

**Art.-No.: P-001-104 1 bottle of 500ml**
**Art.-No.: P-001-104.1 5 bottles of 500ml**
**Art.-No.: P-001-110 5 liter refill canister**
**Art.-No.: P-001-105 10 liter refill canister**

## Product description

For injection into mineral masonry for the purpose of creating both horizontal and areal injection barriers against rising moisture and lateral dampness above the water table levels in accordance with German WTA Data Sheet E-4-10 "Injection Procedures with Certified Injection Materials against Capillary Moisture 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**

Novusan can be used with the following types of masonry:

- Brick and clinker masonry
- Natural stone / rubble stone masonry
- Sandstone masonry
- Calcium silicate and aerated concrete
- Lattice and hollow blocks
- Rammed concrete

## Product application

**Horizontal barrier against rising damp**

In the absence of a horizontal barrier, moisture from the soil is drawn up through the capillaries of the masonry. Injection with Novusan effectively and sustainably interrupts this process. A series of drill holes is made at intervals of 20 cm at the desired barrier height (approximately 5-15 cm above the finished floor level or above the ground) at an angle of 30-50° into the masonry. In the area of masonry corners, one drilling is placed directly into a corner, and the respective first drilling on each side is at a distance of 10 cm. **(Figure 1)** For wall thicknesses over 60 cm, two drillings must be made in the corner of the wall.

**Fig. 1** Drilling Pattern for Horizontal Barrier

The drill hole depth is half the wall thickness; for wall thicknesses over 60 cm, the drill hole depth is approximately 2/3 of the respective wall thickness.
Then, Novusan is injected into the masonry through an injection system, ideally with an electronic flow meter, using the low-pressure injection process via packers or lances.

**Surface barrier against transverse moisture penetration**

In the case of partially subterranean areas or external walls that are built over and cannot be excavated, the leaky wall is sealed from the inside with Novusan to prevent external lateral moisture penetration.
For this purpose, Novusan is injected into the entire wall body, thus forming a barrier throughout the masonry. **(Figure 2)**

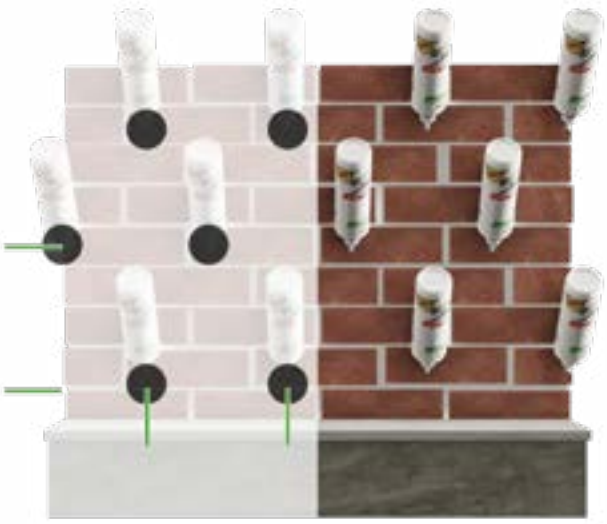

**Fig. 2** Drilling Pattern for Area Barrier

The drill holes are placed at intervals of 20 cm, with additional rows of drill holes arranged one above the other at 20 cm intervals and in a staggered, checkerboard fashion. The last row of drill holes ends approximately 15 cm above the ground level. The corner areas must also be sufficiently supplied with Novusan through additional drillings. Area barriers can also be partially installed; here, the barrier extends approximately 50 cm beyond the last visible sign of damage in all directions. Effective area sealing against capillary lateral moisture penetration in hollow chamber masonry is only possible if the bed joints are continuous and intact, or if the hollow chamber stones are capped. This must be verified before beginning the sealing work. If this cannot be determined unequivocally, a functioning area seal cannot be guaranteed.

**Further areas of application**
**Concrete/ natural and Rubble stone**
Barriers in aerated concrete or calcium silicate are possible with the following limitations:
• The material requires a longer reaction time for pressureless injection.
In natural stone masonry, the drill hole must be set in the stone in such a way that it hits a bed joint or a cavity in half of the masonry.

**Grid and hollow chamber stones**
Novusan spreads pressurelessly in the masonry due to its extraordinarily high creep capacity. It is therefore not necessary to pre-fill cavities or chambers in the masonry with suspensions. The injection into hollow chamber stones is carried out in the upper third of the stone with the aim of enriching Novusan in the cavity. The distribution then takes place over the bed joint. In natural stone masonry, the drill hole must be set in the stone in such a way that it hits a bed joint or a cavity in half of the masonry.

**Consumption**
The consumption depends solely on the wall thickness, not on the type of masonry.

*Material Requirements for Horizontal Barriers*
For wall thicknesses up to 40 cm:
You only need **5 bottles** of Novusan for **1 meter** of barrier with a drill hole distance of 20 cm.

For wall thicknesses over 40 cm:
We recommend **2 rows of drill holes** with a 20 cm drill hole distance and a **10-15 cm** vertical distance.
You will then need **10 bottles** of Novusan for **1 meter** of barrier.

*Material Requirements for Area Barriers*
For wall thicknesses up to 40 cm:
You only need **20 bottles** of Novusan **per square meter.**

## Comments

**Drying duration**
The time required for the masonry to dry to equilibrium moisture depends on the initial moisture level and the provision of good ventilation within the space. Drying equipment should not be used until at least 3 weeks after the application to allow for the reaction time.
After injection, damaged plasters and paints should be removed and replaced with plasters from the BKM.MANNESMANN restoration plaster system. Paint coatings must be exclusively done with breathable silicate paint.

**Delivery, storage**
The product should be stored frost-free. Unopened original containers have a shelf life of 12 months from the date of manufacture. The product reacts with humidity; therefore, opened containers should not be exposed to air or water for extended periods.

**Ecology, safety, disposal**
Ensure good ventilation during processing and complete evaporation of the carrier material. Protective measures such as masks, goggles, and gloves are recommended during application. For detailed information on safety, transport, ecology, and disposal, refer to the most recent 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:**
**www.bkm-mannesmann.de**