

DampStop Concentre

Silane/siloxane based, water-dilutable capillary damp barrier concentrate

1 L · 5 L · 20 L



PRODUCT DESCRIPTION

DRYVATEC D101 DampStop Concentre is a solvent-free, silane/siloxane based injection concentrate developed to stop rising damp in masonry walls. It is diluted with water before use.

Where a building was constructed without a horizontal damp-proof course, or where the original course has lost its function over time, ground water is drawn upwards through the capillary pores of the wall. D101 is injected through holes drilled at the base of the wall and establishes a retrofitted horizontal barrier that interrupts this movement.

The concentrate is diluted at 1 part product to 9 parts water; a 5 L pack yields 50 L of ready-to-use solution, giving approximately 6 % active content. It contains no solvents or chemical salts and is not classified as a flammable liquid.



MODE OF ACTION

Capillary rise is driven by the surface tension between water and the pore wall. As long as water can wet the pore wall, it is drawn upwards through narrow voids.

In D101 the active silane and siloxane molecules are held stable within the water phase. They do not react in the pack or after dilution; activation begins only when the solution reaches the pore surface of the building material. This delayed reaction is the defining property of the system — the solution does not set before it has completed its distribution through the cross-section.

- During the reaction the molecule bonds to the silicate structure of the pore wall; its water-repellent alkyl chain turns into the void and the wall surface becomes non-wettable.
- Capillary suction ceases and the barrier forms throughout the entire cross-section, not merely around the borehole.
- The layer does not fill the pore volume; it coats only the pore surface. Water vapour transmission continues — the wall stays breathable and gradually releases the moisture trapped in its cross-section.
- The resulting structure is alkali-resistant and retains its effectiveness in cement- and lime-bearing substrates.

As the barrier becomes part of the wall material itself, it does not age, peel, tear or suffer from mechanical stress.



TECHNICAL DATA

AT +23 °C / 50 % RELATIVE HUMIDITY

Product type	Silane/siloxane based, solvent-free emulsion
Appearance / colour	Milky white liquid
Density (20 °C)	0.95 – 0.98 g/cm³
Active content (concentrate)	approx. 60 %
Dilution ratio	1 part product : 9 parts water
Active content (solution)	approx. 6 %
Dilutability in water	In any ratio
Mode of action	Hydrophobisation
Alkali resistance	High
Barrier formation time	48 hours
Flash point	65 °C — not classified as a flammable liquid
Application temperature	+5 °C / +30 °C
Borehole diameter	14 mm
Borehole spacing	10 cm
Borehole angle	30° – 45° downward
Borehole depth	4/5 of the wall thickness (approx. 80 %)
Shelf life	24 months
Packaging	1 L · 5 L · 20 L

Values are typical figures obtained at +23 °C / 50 % relative humidity.

PREREQUISITE FOR APPLICATION

Damp plaster must be removed and the surface renewed with HydroFix damp-proofing render before injection. Boreholes are drilled once the render has cured. If this sequence is omitted, the perforations of hollow bricks are opened during plaster removal, the injection material escapes into the voids and barrier continuity cannot be achieved.

FIELDS OF APPLICATION

- Interruption of rising damp in non-loadbearing internal and external walls at ground and basement level
- Solid brick, perforated brick, pumice, aerated concrete, natural stone and mixed masonry cross-sections
- Retrofitting a horizontal damp-proof course in existing buildings
- Historic buildings and restoration projects requiring minimum intervention
- Food production and storage facilities — non-toxic and odourless

BENEFITS



Diluted 1:9

5 L yields 50 L of ready solution



Barrier in 48 hours

Capillary rise stops within 48 h



Alkali resistant

Effective in cement and lime substrates



No demolition

Only 14 mm holes; no structure removed

DIAGNOSIS BEFORE APPLICATION

Signs of rising damp

- The damp line runs parallel and horizontal to the floor, usually stopping between 0.5 and 1.5 m, and shifts little with the seasons.
- White salt efflorescence accumulates immediately above the line — as the water evaporates it leaves behind the salts it carried.
- Blistering plaster, flaking paint and mould at the base of the wall; the surface feels cold and damp to the touch.
- Within the cross-section, moisture is concentrated inside the wall rather than at the surface.

For confirmation, a depth moisture profile using the calcium carbide (CM) method is recommended, or a comparison between readings taken at the base and at higher levels using a resistance meter.

Differential diagnosis — these are not rising damp

SUBSTRATE / WALL TYPE	STATUS	NOTES
Condensation	● Not suitable	Upper corners and ceilings
Plumbing leak	● Not suitable	Local, irregular outline
Hydrostatic pressure	● Not suitable	Below-grade retaining walls
Roof or façade leak	● Not suitable	Linked to rainfall
Capillary rise	● Suitable	D101 is applicable

Injection will not succeed where the damp problem has been diagnosed incorrectly. If the symptoms do not match rising damp, the source must be eliminated first.

SUBSTRATE SUITABILITY

SUBSTRATE / WALL TYPE	STATUS	NOTES
Solid brick, natural stone, mixed masonry	● Suitable	Continuous capillary network; homogeneous barrier
Pumice, aerated concrete, adobe	● Suitable	High absorbency; calculate from upper consumption values
Perforated brick	● Conditional	Render must be renewed first, otherwise material escapes into voids
Very thick (>60 cm) or cavity cross-section	● Conditional	Two-sided injection and prior survey required
Reinforced concrete walls, columns, foundations	● Not suitable	No capillary network; use the Nem Kutusu device instead
Timber, metal, painted surfaces	● Not suitable	Product is designed for mineral substrates

PREPARING THE SOLUTION



1 L
D101 DampStop
concentrate

+



9 L
clean
tap water

=

10 L
ready-to-use solution
approx. 3.3 m in a 20 cm wall



5 L
D101 DampStop
concentrate

+



45 L
clean
tap water

=

50 L
ready-to-use solution
approx. 16.5 m in a 20 cm wall

Add the concentrate to the measured water — never the other way round — and stir with a low-speed mixer. Allow to stand for 5 minutes. Dirty, saline or excessively hard water reduces performance. The diluted solution may be stored; a slight difference in density can develop on standing and is reversed by stirring for one to two minutes without any loss of performance. For consistent results the solution should nevertheless be used on the day of preparation.

CONSUMPTION

WALL THICKNESS	BOREHOLE DEPTH	SOLUTION PER METRE	PER HOLE	CONCENTRATE / M
10 cm	8 cm	1.50 L	150 mL	0.150 L
15 cm	12 cm	2.25 L	225 mL	0.225 L
20 cm	16 cm	3.00 L	300 mL	0.300 L
25 cm	20 cm	3.75 L	375 mL	0.375 L
30 cm	25 cm	4.50 L	450 mL	0.450 L
40 cm	35 cm	6.00 L	600 mL	0.600 L
50 cm	45 cm	7.50 L	750 mL	0.750 L

The first three columns refer to the ready-to-use solution diluted 1:9; the last column gives the amount of neat concentrate required for the same metre. Values assume 10 cm borehole spacing and a solid wall cross-section; consumption increases in perforated brick and cavity construction.

BOREHOLE PATTERN

- Boreholes are drilled 10 cm above floor level, in line with the lowest horizontal mortar joint.
- Spacing between boreholes is 10 cm; the row must be uninterrupted.
- Diameter 14 mm, inclined 30–45° downwards.
- Depth equals 4/5 (approx. 80 %) of the wall thickness — e.g. 16 cm in a 20 cm wall.
- Boreholes are cleared of dust with compressed air.

APPLICATION SEQUENCE

- Remove damp and blistered plaster from the wall.
- Apply HydroFix damp-proofing render and allow it to cure.
- Drill and clean the injection holes.
- Inject the solution at low pressure or by gravity; verify consumption per hole with a metered nozzle.
- Leave the saturated holes open for 48 hours.
- Close the holes with repair mortar and finish the surface.

COMMON MISTAKES

- **Drilling before the plaster is removed**
In perforated brick the cells are opened and the solution escapes into the voids; the barrier remains discontinuous.
- **Spacing boreholes further than 10 cm apart**
Gaps are left in the barrier and damp continues to rise between them.
- **Drilling the holes at an upward angle**
The solution flows back out by gravity and cannot penetrate the cross-section.
- **Using a stored solution without stirring**
A density difference may develop on standing; unstirred solution is unevenly distributed.
- **Closing the holes before 48 hours have elapsed**
Distribution is interrupted before completion and the barrier does not span the full cross-section.
- **Injecting without renewing the surface**
The moisture and salts already present in the wall continue to reach the surface. The client sees no result and the work is judged a failure.

POST-APPLICATION CHECKS

- **Consumption record:** confirm with the meter that the target volume in mL has been reached at every borehole and enter it in the record sheet.
- **Visual verification:** appearance of the solution at the adjacent borehole or on the joint face indicates continuous distribution.
- **Drying monitoring:** take measurements at the same reference points at 3, 6 and 12 months; the trend must be downward.
- **Drying time:** depending on cross-section, thickness and salt load, drying takes 6 – 12 months. The wall must not be painted during this period.
- **Paint selection:** only vapour-permeable coatings may be used. Acrylic or plastic based paint blocks vapour transmission and causes the renovation layer to blister.

FREQUENTLY ASKED QUESTIONS

- S Is the barrier permanent?**
Yes. The barrier becomes part of the wall material itself, so it does not peel, tear or age. Unlike a membrane it cannot be punctured.
- S Why is a render also required?**
Injection stops new moisture from rising, but the water and salts already present in the wall continue to migrate to the surface. HydroFix renews this surface.
- S Can it be applied in winter?**
Ambient and surface temperature must be above +5 °C. Application should be postponed if frost is expected within 48 hours.
- S Can the building remain occupied?**
Yes. The products are odourless, solvent-free and not flammable. No demolition is required — only 14 mm boreholes are drilled.
- S How long until the wall is dry?**
The barrier forms within 48 hours and no new moisture rises. The water already held in the cross-section is released over 6 – 12 months.
- S When can the wall be painted?**
At least three days after the HydroFix render has been applied and once it is visibly dry, and only with a vapour-permeable (silicate or silicone emulsion based) paint.



STORAGE

24 months in the unopened original packaging. Store in a dry, cool place, protected from frost and direct sunlight.



SAFETY

Wear gloves, eye protection and a mask. Do not inhale or swallow. Refer to the Safety Data Sheet for further information.



LIMITATIONS

Not suitable for reinforced concrete structural elements. Active water ingress must be stopped before application.

POSITION WITHIN THE THREE-STAGE SYSTEM

DampStop is the first stage of the system; it interrupts the moisture source within the wall cross-section.

01 DampStop

Horizontal chemical barrier inside the wall

02 HydroFix

Water-repellent surface renovation layer

03 Nem Kutusu

Electromagnetic drying in reinforced concrete

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