Doing deliberately:

Durable protection against driving rain and damp facades

Sustainable solutions

PFAS-freie Formulierung

remmers

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SUSTAINABLE SOLUTION WITH DECISIVE BENEFITS

Hydrophobic treatments with Funcosil

Make moisture protection simple and efficient

BOTH THE CREAMS AND LIQUID PRODUCTS

- ✓ are PFAS-free
- ✓ are sustainably developed and contain fewer hazardous substances to protect the environment and health
- ✓ are ready to use
- ✓ have an excellent long-term effect
- ✓ are UV-resistant
- ✓ are vapor-permeable
- ✓ reduce energy losses
- ✓ reduce pollution and greening

Ecological responsibility

The entire Funcosil product line is PFAS-free and largely water-based.

As an international manufacturer of products for the protection and maintenance of structures, Remmers is aware of its great responsibility towards people and the environment. Therefore, we not only set very high standards regarding technical performance, but also focus on ecological responsibility, sustainable development, and limiting hazardous substances to protect health.

Traditionally, fluorinated substances are added to hydrophobic impregnating agents, so-called PFAS (per- and polyfluoroalkyl substances), added to obtain certain properties. Some of these substances pose a significant danger to the environment and health and are therefore no longer added to Remmers products.

Remmers opts for new, modern formulas without PFAS, which moreover has no alifa-chemical and aromatic hydrocarbons contain. By consistently limiting hazardous substances, we help better protect the environment and health.

Funcosil hydrophobic creams Simple and effective moisture protection

Hydrophobic treatments in cream form significantly increase the contact time between the active substance and the surface of the building material.

In this way, a large penetration depth and absorption of the active ingredients can be achieved with just a single application, for long-lasting protection against moisture.

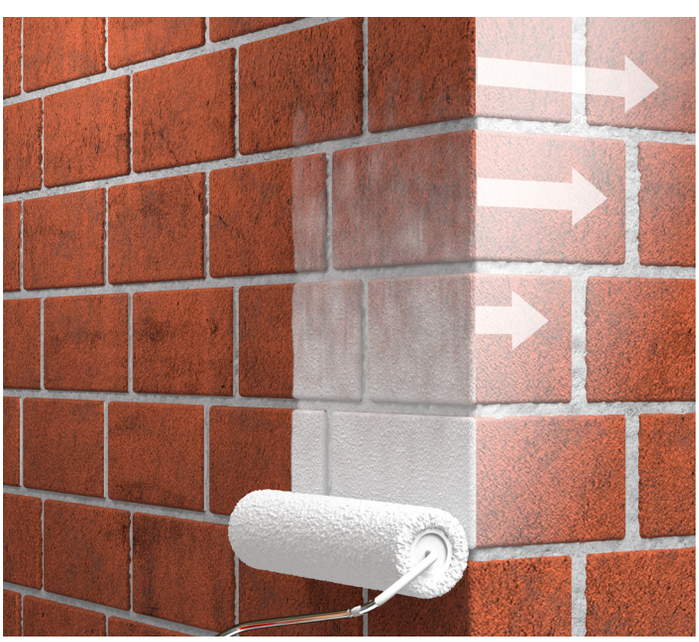
The major advantage of cream products is that when working above your head, you waste almost no product and can very accurately control the amount you apply.

The creamy consistency of Remmers Funcosil hydrophobic paste ensures a long contact time with the surface of the building material. During this time, the active ingredient is absorbed into the building material. The result: a large penetration depth, and thus high and more durable protection against the absorption of water and pollutants.

Giving facade surfaces an effective hydrophobic treatment has never been as cost-effective as with Funcosil hydrophobic creams.

THE BENEFITS AT A GLANCE

- Easy, extremely accurate, and waste-free application, even above your head
- single-layer treatment
- low material consumption per m^2
- no losses due to flowing material
- no time-consuming side activities more



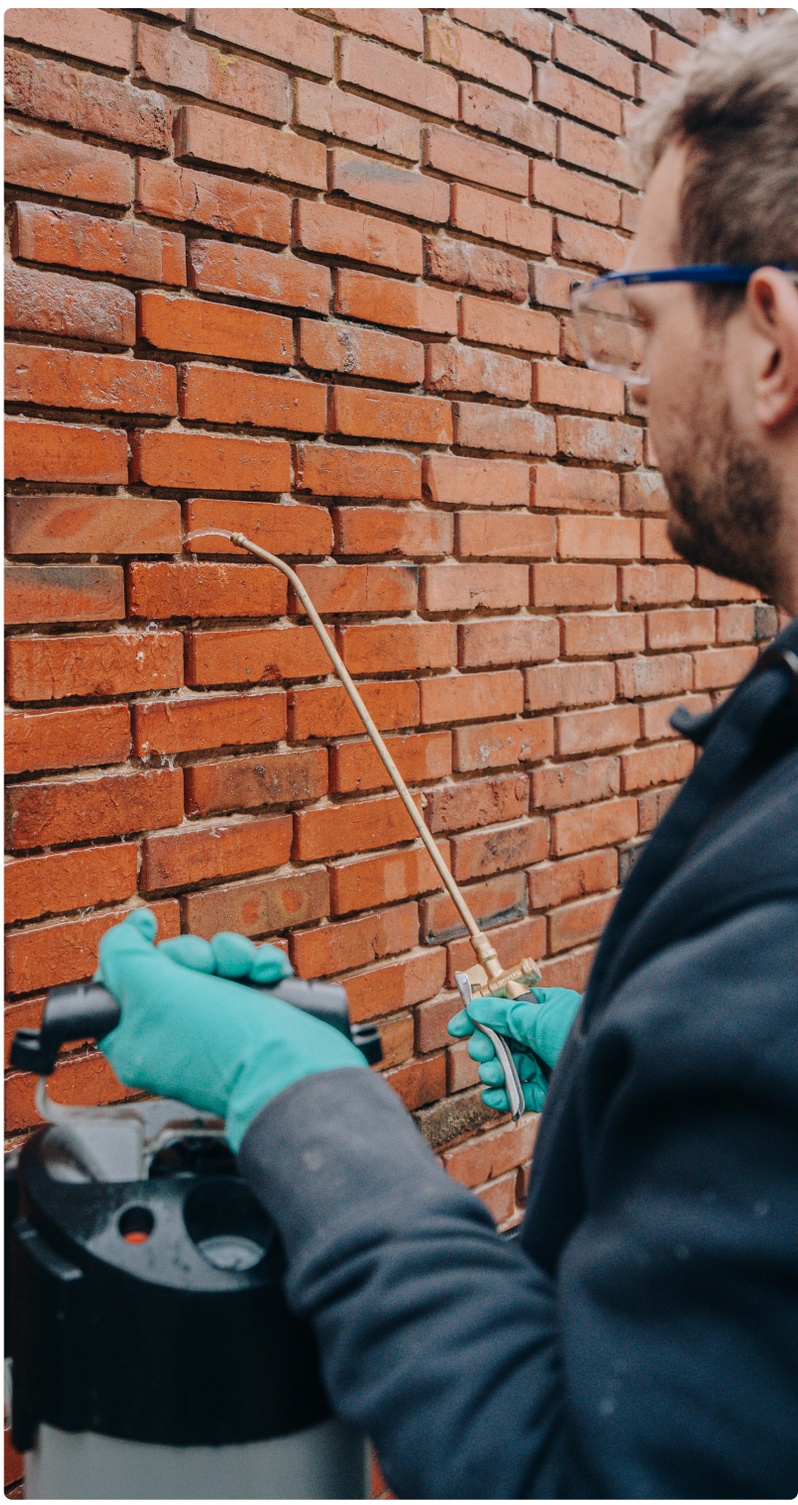
The long contact time of the cream on the surface of the building material results in an exceptionally large penetration depth.

Funcosil Liquid Impregnators The Classics

Liquid impregnating agents are preferably applied by flooding, without applying pressure. This minimizes the formation of aerosols, protecting the user.

THE BENEFITS AT A GLANCE

- excellent penetration depth
- proven technology with more than seventy years of experience
- economical and efficient



The facade is saturated to such an extent that a liquid film 30 to 50 cm long runs down. This method ensures that the hydrophobic product can penetrate deep into every pore, cavity, and crack. On porous, highly absorbent substrates, you achieve very large penetration depths and excellent long-term stability if you carry out the treatment as prescribed.

That is what makes well-treated facades so durable.

You can apply the product with all low-pressure, pressure, and liquid pumps.

To prevent imperfections, contiguous (including adjacent) surfaces must be impregnated in a single application.

Water is the culprit: damp facades and the consequences

Water plays a central role in the weathering of minerals building materials

Whenever moisture penetrates a building material:

- the absorption of pollutants increases!
- frost damage may occur!
- creates a base on which algae, mosses, and other microorganisms can grow!
- the thermal insulation effect decreases significantly!

How does a hydrophobic treatment help against these problems? Hydrophobic impregnations significantly reduce the capillary water absorption of a facade due to rain and splashing water. The hydrophobic treatment is therefore a sensible measure to prevent damage.

A hydrophobic impregnation makes the treated building material water-repellent, while the open porosity and thus the vapor permeability are retained.

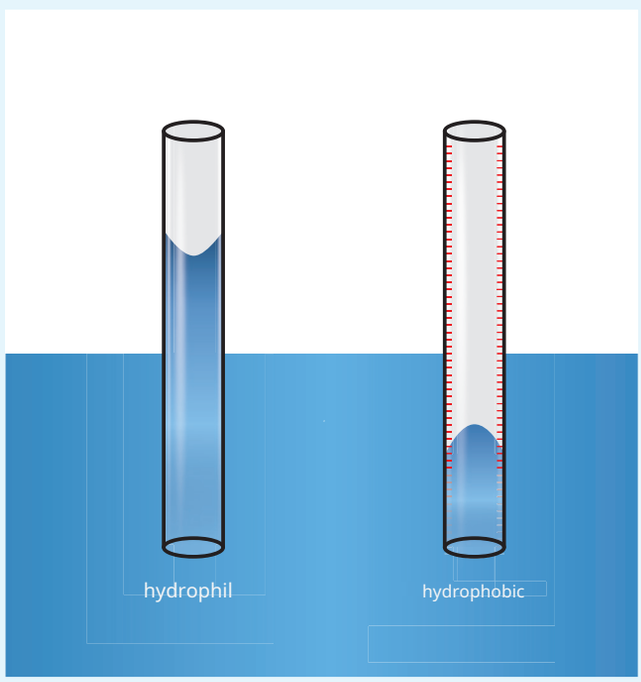
Water-repellent and breathable – how does that work?

This phenomenon can be explained by means of a simple experiment.

A thin glass tube is placed in a water tank, after which the water in the tube rises.

Here, the so-called capillary forces are at work. If the glass tube now undergoes a hydrophobic treatment, this effect reverses. The water is no longer 'sucked in', but pushed out.

This is the result of a nanoscale 1-molecule layer of the hydrophobizing agent on the pore walls. This means that the open cross-section required for vapor diffusion is virtually unrestricted. Air and water vapor still find their way out.



Moisture protection is thermal insulation

Water conducts cold well. Reducing the moisture content of a building material therefore always leads to an improvement in its thermal insulation properties.

In the case of damp tiled facades, hydrophobic impregnation is therefore the first and most cost-effective measure to reduce energy consumption and thus the to reduce heating costs. A desirable side effect, and important in the fight against global warming, is that CO_2 emissions in existing buildings also decrease in this way. Moreover, the water-repellent finish of cavity-free facades usually leads to a significant shift in the dew point, reducing the risk of mold formation on the inside.

Benefits of a hydrophobic treatment

- reduction of energy consumption in buildings
- reduction of CO2 emissions
- limiting the risk of mold growth

Funcosil test set

Equipment for non-destructive testing of water absorption and effectiveness control of hydrophobic impregnations.

Non-destructive testing with the Funcosil test tube according to Dr. Ir. Karsten provides information about the absorption behavior of a building material or element when exposed to driving rain. Water absorption according to Dr. Ir. Karsten is suitable for both the construction site and the laboratory. The test can be used on all uniform, capillary-active, or hydrophobic substrates.

Remmers recommends this method to verify the effectiveness of hydrophobic treatments. Measurements before and after the treatment of a facade show the extent to which the hydrophobic agent used reduces moisture absorption during driving rain.

The measured water uptake can be used as a guideline for building physics calculations.
Moreover, potential imperfections, such as cracks or mortar spacers, can be checked on site without causing damage.

Funcosil

Hydrophobic treatments & effectiveness control

Funcosil SL Alc

Moisture protection for limestone and solvent-sensitive building materials and joint zones, contains ethanol (alcohol)

Funcosil SNW

Colorless, hydrophobic impregnation based on silane/ siloxane in the form of an aqueous emulsion with Remmers System Guarantee

Facade Impregna- tion [basic]

Hydrophobic impregnation based on silane/siloxane in the form of an aqueous emulsion

Funcosil FC

Hydrophobic impregnation cream based on silane with Remmers System Guarantee

Funcosil RTD

Moisture-resistant protection for concrete and reinforced concrete, solvent-free, liquid. Meets the requirements of RWS RTD 1002 and EN 1504-2

Face Cream 25 [basic]

Hydrophobic impregnation cream

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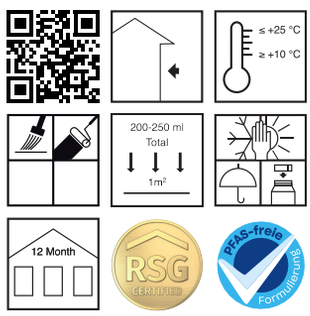
All system products listed

Funcosil FC

Hydrophobic impregnation cream based on silane

Areas of application	ƒdriving rain protection for facades ƒreduces pollution and greening ƒporous, mineral substrates outdoors ƒdriving rain protection for curative cavity insulation and interior insulation ƒrenewal of the hydrophobic treatment when grouting brickwork stones with slurry
Properties	ƒvery water-repellent ƒvapor permeable ƒimproves the frost/de-icing salt load ƒ exceptionally good penetration power ƒUV-resistant ƒalkali resistant ƒexcellent long-term effect ƒeasy and accurate to apply without waste ƒquickly rainproof, approx. 60 minutes after application ƒPFAS-free composition
Consumption	ƒdepending on porosity, in a single coat: approx. 0.2 - 0.25 l/m²

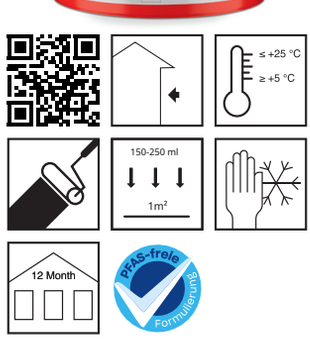


Quantity per pallet	288	64	32	32
VPE	0.75 l bucket K	5 l bucket K	12.5 l bucket K	20 l bucket K
Packing code	01	05	13	20
Article no.				
5462	-	-	-	-

Systempro-ducts	Article no.
FM FS 1.0	(0435)

Facade Cream 25 [basic]

Areas of application	ƒimpregnation of mineral substrates ƒdriving rain protection for facades ƒreduces pollution and greening ƒporous, mineral substrates outdoors ƒdriving rain protection for curative cavity insulation and interior insulation
Properties	ƒwater-repellent ƒvapor permeable ƒimproves the frost/de-icing salt load ƒUV-resistant ƒeasy and accurate to apply without waste ƒPFAS-free composition
Consumption	ƒDepending on the porosity approx. 0.15 - 0.25 l/m². The required how-The amount of impregnating agent can be determined on a sufficiently large test area (1-2 m²).



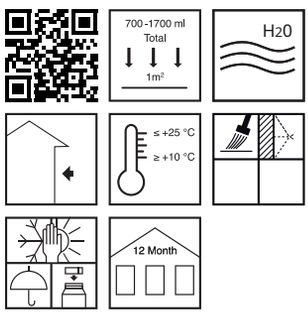
Quantity per pallet	64	32	1
VPE	5 l bucket K	12.5 l bucket K	1000 l container
Packing code	05	13	61
Article no.			
5463	-	-	-

Systempro-ducts	Article no.
BFA*	(0673)
Clean SL	(0671)
Clean FP	(0666)
Clean AC	(0672)
Clean WR	(0675)

Funcosil SNW

Colorless, hydrophobic impregnation based on silane/siloxane in the form of an aqueous emulsion

Areas of application	ƒdriving rain protection for facades ƒ reduces pollution and greening ƒrefreshing older, long-standing weathered hydrophobic treatments gene ƒcurative impregnation of mineral paint layers ƒporous, mineral building materials such as brick, sand/lime sandstone, cellular concrete and mineral plaster ƒmineral coatings of thermal insulation systems
Properties	ƒimproves the frost/de-icing salt load ƒ water-repellent ƒvapor permeable ƒexceptionally good penetration power ƒ UV-resistant ƒalkali resistant ƒexcellent long-term effect ƒ solvent-free ƒodorless ƒreduces energy losses ƒPFAS-free composition ƒsuitable for use with building materials that are sensitive to solvents
Consumption	ƒFine porous brick: min. 0.8 l/m² Coarse porous brick: min. 1.2 l/m² smooth calcium silicate brick: min. 0.7 l/m² rough, broken calcium silicate brick: min. 0.8 l/m² plasterwork - removal cellular concrete: min. 1.0 l/m² facing concrete block - removal fine porous natural stone: min. 0.8 l/m² coarse porous natural stone: min. 1.7 l/m²



Systempro-ducts	Article no.
BFA*	(0673)
Remmers joint mortar	

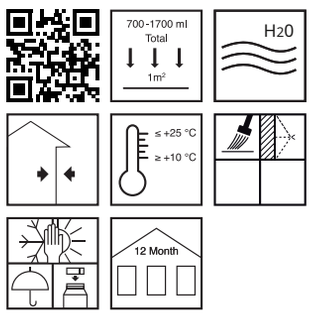
Quantity per pallet	84	24	2	1
VPE	5 l bus K	30 l bus K	200 l barrel *	1000 l container *
Packing code	05	30	69	61
Article no.				
5471	-	-	-	-

* on request

Facade Impregnation [basic]

Hydrophobic impregnation based on silane/siloxane in the form of an aqueous emulsion

Areas of application	ƒdriving rain protection for facades ƒ reduces pollution and greening ƒrefreshing older, long-standing weathered hydrophobic treatments gene ƒporous, mineral substrates, such as sand-lime brick, natural stone, brick masonry, mineral plasters, aerated and aerated concrete ƒ curative impregnation of mineral paint layers
Properties	ƒwater-repellent ƒvapor permeable ƒsolvent-free ƒUV-resistant ƒalkali resistant ƒexcellent long-term effect ƒPFAS-free composition ƒsuitable for use with building materials that are sensitive to solvents
Consumption	ƒsmooth lime sand brick: min. 0.7 l/m² rough, broken lime sand brick: min. 0.8 l/m² brick masonry - removal fine porous brick: min. 0.8 l/m² coarse porous brick: min. 1.2 l/m² cellular concrete: min. 1.2 l/m² lightweight concrete - removal fine porous natural stone: min. 0.8 l/m² coarse porous natural stone: min. 1.7 l/m²



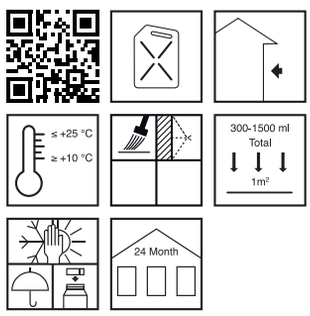
Quantity per pallet	84	24	1
VPE	5 l bucket K	30 l bucket K	1000 l container
Packing code	05	30	61
Article no.			
5472	-	-	-

Systempro-ducts	Article no.
BFA*	(0673)
Remmers joint mortar	
Remmers cleaning products	

Funcosil SL Alc

Colorless, hydrophobic impregnation based on silane/siloxane, especially for solvent-sensitive building materials and joints, as well as for limestone.

Areas of application	ƒdriving rain protection for facades ƒ reduces pollution and greening ƒporous, mineral building materials, particularly limestone ƒmineral surfaces with adjacent or embedded solvents leak-sensitive components such as polystyrene (core insulation or complete thermal insulation systems) or bitumen ƒpost-treatment/refreshing of hydrophobic substrates
Properties	ƒimproves the frost/de-icing salt load ƒvery water-repellent ƒvapor permeable ƒgood penetration power ƒUV- resistant ƒalkali resistant ƒexcellent long-term effect ƒsuitable for use with building materials that are sensitive to solvents ƒreduces energy losses ƒPFAS- free composition
Consumption	ƒsmooth lime sand brick: min. 0.5 l/m² rough, broken lime sand brick: min. 0.7 l/m² fiber cement: min. 0.3 l/m² concrete: min. 0.5 l/m² fine porous brickwork: min. 0.8 l/m² plaster: min. 0.5 l/m² insulation plaster: min. 0.6 l/m² cellular concrete: min. 1.0 l/m² lightweight concrete: min. 1.0 l/m² fine porous natural stone: min. 0.2-0.5 l/m² coarse porous natural stone: min. 0.4-1.5 l/m²



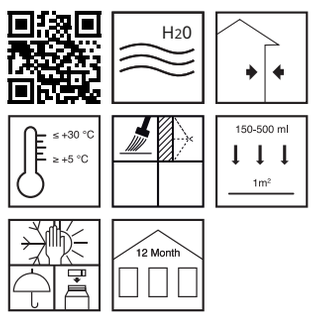
Systempro-ducts	Article no.
BFA*	(0673)

Quantity per pallet	84	24
VPE	5 l	30 l
	bus W	bus W
Packing code	05	30
Article no.		
5473	-	-

Funcosil RTD

Solvent-free, hydrophobic impregnation for concrete, suitable for structures such as viaducts, tunnels, and bridges. Complies with RWS RTD1002

Areas of application	ƒdeep hydrophobization of concrete and reinforced concrete in bridges, road and construction structures ƒprotection against penetrating de-icing salt ƒ protection against frost/de-icing salt damage
Properties	ƒcomplies with RWS RTD1002 ƒimproves the frost/de-icing salt load ƒ water-repellent ƒvapor permeable ƒhighly concentrated (approx. 99% active ingredients) ƒalkali resistant ƒexcellent long-term effect ƒexceptionally good penetration power ƒsolvent-free ƒsuitable under asphalt ƒ complies with DIN EN 1504-2 ƒ PFAS-free composition



Quantity per pallet	84	24	2	1
VPE	5 l bus W	30 l bus W	200 l barrel	958 l container
Packing code	05	30	69	61
Article no.				
0731	-	-	-	-

Funcosil test set

Equipment for non-destructive testing of water absorption and effectiveness control of hydrophobic impregnations

Areas of application	ƒnon-destructive testing of water absorption/unit of time ƒ effectiveness control of hydrophobic treatments ƒestimation of the water absorption coefficients in accordance with DIN EN 772-11 possible
Properties	ƒContents: 6x Funcosil test tubes, 1x digital stopwatch, 1x spray bottle (polyethylene) 1x painter's spatula (width 30 mm) 1x butyl rubber (fastener)

VPE	1 piece
Packing code	01

Article no.	
4954	-

Systempro-ducts	Article no.