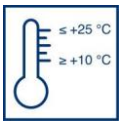
Technical Data Sheet
Art. No. 0604

Funcosil SN

Low molecular alkyl alkoxy siloxane in alcohol


Solvent based


For use outdoors



Working temperature


Brush/roller/ low pressure spraying

Application rate in total


Store frost-free and cool, protected from moisture in closed containers

Shelf-life

Range of use

Funcosil SN is used for hydrophobic impregnation of porous, mineral building materials such as fair-faced brick masonry work, sand-lime brick and mineral renders.

It is especially used when core insulation or full thermal insulation systems are present that use polystyrene insulation material (e.g. Styrofoam) or other solvent-sensitive building elements or materials, especially bitumen, bitumen joints, bitumen roofing sheets. It can also be used for the subsequent impregnation of water glass paint coatings.

Produktkenndaten

Siloxane content:	approx. 7% by weight
Carrier:	isopropanol, anhydrous
Density:	approx. 0.80 g/cm³
Viscosity:	51 sec. in DIN 2 cup
Flash point:	< 21° C.
Appearance:	clear liquid
Odour:	alcoholic
Water absorption:	very little
UV stability:	good
Weathering resistance:	high
Long term water repelling effect:	> 10 years have been proved
Alkali resistance:	up to pH 14
Tack-free drying:	given
Tendency to soil:	low
Toxicity:	physiologically safe after drying

Property profile

Funcosil SN is a reactive, oligomer siloxane solution for water repelling impregnation of mineral building materials.. Because of its low molecular structure in the packaged state, Funcosil SN has very good penetration capacity and reacts chemically in the building material in the presence of humidity to become a water repelling, UV and weather resistant active ingredient. After application, the active ingredient is deposited on capillary and pore walls as a macromolecular layer without essentially influencing water vapour diffusion capacity.

Funcosil SN reduces the absorption of water and pollutants. As a result, infestation with micro-organisms is reduced on treated mineral building materials and frost/de-icing salt resistance is improved. Energy loss is reduced. Building material surfaces impregnated with Funcosil SN also show considerably less tendency to soil.

Substrate

The substrate must be in sound condition. Structural defects such as cracks, cracked joints, defective connections, rising damp and hygroscopic moisture must be remedied first. It must be ensured that

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water and damaging salts dissolved in water cannot penetrate behind the hydrophobized zone.

Surfaces that are to be impregnated often have a crust/patina made up of various types of soil that reduce the absorption capacity of the building material. To reinstate the original absorption capacity, cleaning measures are required that should be as gentle as possible, e.g. by spraying with cold or warm water or by steam cleaning.

Stubborn soiling is preferably removed with the Rotec Low Pressure Blaster or with one of the Remmers facade cleaning products (see Technical Data Sheets for the respective products).

When cleaning, make sure that the substance of the building material is damaged as little as possible.

Residue from prior cleaning measures (e.g. surface-active agents) could impair the hydrophobic effect and must be thoroughly washed off.

Substrate properties:
A prerequisite for an optimal impregnation effect is the absorption of impregnation agent. This is dependent on the pore volume of the building material and moisture content. For this reason, the substrate must be as dry as possible.

High salt concentrations lead to severe damage that cannot be prevented by hydrophobic impregnation.

Adjoining surfaces:
Building elements and materials that should not come in contact with the impregnation agent (e.g. glass, varnished surfaces as well as surfaces to be varnished as well as plants) should be protected by suitable measures (e.g. by covering with plastic sheets).

Directions

The impregnation agent is to be applied by flow coating under gravity in such amounts that a 30-50 cm long film of liquid runs down the building material surface. The spray nozzle is led horizontally along the facade without interruption. After the impregnation agent has been absorbed, the procedure is repeated several times. Spraying pressure and nozzle diameter should be adjusted so that misting does not occur.

In order to avoid missing places, limited sections should be impregnated to conclusion without interruption at one time. On smaller, complicated surfaces that do not allow a spray application, a brush or roller can also be used. With this method, insufficient application amounts can only be avoided by generously saturating tools.

Protect freshly impregnated surfaces from driving rain for at least five hours. Strong wind and direct sunlight can speed evaporation of the carrier agents which negatively influences penetration depth.

It is recommended to wash down substrates with little absorbency one-half to one hour after impregnation with V 101 Thinner to remove excess material which could lead to the formation of a gloss.

Working temperature:
Hydrophobizing impregnation is preferably carried out in a temperature range between +10° C and +25° C. Strong surface heating caused by the sun can be prevented by using awnings. At temperatures below +10° C, evaporation of the carrier agent and active ingredient formation may be delayed.

Notes

During work and the drying period, especially at low temperatures and when there is no wind, solvent vapours may enter the building. All windows, doors and openings should be closed during impregnation work. After the impregnation agent has dried, ventilate living spaces.

Testing the effectiveness

Water absorption in mineral building materials before and after hydrophobizing impregnation can be determined by means of the Funcosil Test Plate (Art. No. 0732) or with a test tube developed by Prof. Karsten. Re-testing should be carried out 4 weeks at the earliest after the hydrophobizing measures and the measured data recorded.

Tools, cleaning

All solvent resistant low pressure conveyor and spray equipment, liquid pumps are suitable. Tools must be dry and clean. After use and before longer pauses, clean thoroughly with V 101 thinner or spirit.

Packaging, application rate, storage

Packaging:
5 l and 30 l tin containers

Application rate:

Sand-lime brick, smooth:
At least 0.5 l/m²
Sand-lime brick, cleft:
At least 0.7 l/m²
Fibrated cement:
At least 0.3 l/m²
Concrete:
At least 0.5 l/m²
Fair-faced masonry work, fine pored:
At least 0.8 l/m²
Render:
At least 0.5 l/m²
Thermal insulation render:
At least 0.6 l/m²
Light-weight concrete:
At least 1.0 l/m²

The required amount of impregnation agent for calculation and tender should be determined on a sufficiently large (1-2 m²) trial area. The effectiveness of the impregnation can also be determined on this area.

Shelf-life:
At least 2 years in closed, original containers. Store dry and protect containers from temperatures above +30 °C. Once containers have been opened, the contents should be used as soon as possible.

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gloves, see Safety Data Sheet. Wear closed work clothes.

Safety, ecology, disposal

Further information on safety when transporting, storing and handling as well as on disposal and ecology is found in the latest Safety Data Sheet.

Personal protective equipment is required for spraying procedures. Use respiratory protection with a combination filter at least A/P2 (made by e.g. Draeger). For suitable protective

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