

## Technical Information Sheet Article No. 0710

# Funcosil IC

Aqueous, solvent-free impregnation cream on a silane base

### Range of use

Funcosil IC is especially recommended for deep water repelling treatment and priming of concrete and reinforced concrete in bridge and road areas as well as for buildings.

Funcosil IC is not suitable for facades made of exposed aggregate concrete or similar materials. In these cases, use Funcosil BI.

### Property profile

Funcosil IC is a high quality, special product for deep water repelling treatment of concrete and reinforced concrete.

### Characteristics:

- Excellent penetration capacity (deep water repellency)
- Optimal resistance against alkalis
- Reduces the absorption of water
- Strong protective effect against frost/de-icing salt loads
- Good adhesion
- Solvent-free, aqueous and compatible with the environment
- Little volatility
- Thixotropic; can be applied without any loss

Funcosil IC is excellently suited for deep water repelling treatment of high quality concrete and reinforced concrete. As opposed to conventional liquid products, Funcosil IC can be applied in a single or two working operations, if necessary. Depending on porosity, the active silane ingredient penetrates into the substrate within a short time (30 min. to several hours) where it reacts, becoming a polysiloxane. The initial white layer completely disappears. Funcosil IC has been formulated so that it penetrates as deeply as possible into the concrete, providing optimal

protection against the absorption of water and pollutants and preventing damage caused by frost/de-icing salts. Funcosil IC's water repelling effect takes a while to become effective and improves after becoming wet.

### Test certificates

Tested according to class OS-A of TL/TP OS of ZTV-SIB, Bast listed.



## Characteristic data of the product

|                   |                      |
|-------------------|----------------------|
| Active substance: | ca. 80 M.-%          |
| Desity:           | ca. 0,9 kg/l         |
| pH-value:         | ca. 8                |
| Flash point:      | ca. 74 °C            |
| Appearance:       | milky, white, creamy |

## Substrate

### Substrate preparation:

To make sure that the cement has time to set properly, water repelling treatment should not be carried out on concrete for at least two weeks at the earliest and better four weeks after production.

New surfaces that are still clean should be swept off, removing coarse particles and dust, using compressed air if necessary. Surfaces that have already weathered or become soiled (patina) often have reduced absorption capacity. To restore the original absorption capacity, the cleaning measures used should be a gentle as possible, e.g. by spraying cold or warm water or by steam cleaning. Stubborn soil should be preferably removed using the Rotec Low Pressure Blasting Procedure or with one of Remmers cleaning products (see the respective Technical Information Sheets). When cleaning, make sure that the building substance is not damaged more than necessary. Residue from prior cleaning (e.g. surface active agents) can interfere with the water repelling effect and must be thoroughly washed off for this reason.

### Condition of the substrate:

Absorption of the impregnation agent is a prerequisite for obtaining an optimal impregnation effect. This depends on the respective pore volume of the building material and its moisture content. The substrate must therefore be as dry as possible. High concentrations of salts can lead to serious damage which cannot be prevented by a hydrophobizing impregnation agent.

### Adjacent surfaces:

Building elements that should not come in contact with the impregna-

tion agent (e.g. glass, varnished surfaces or surfaces to be varnished as well as plants) should be covered with plastic sheets.

## Directions

Apply Funcosil IC with a roller (lambskin), wide brush or airless equipment (observe job safety rules and use respiratory protection). Depending on the absorpency of the substrate, an application rate of 0.2 l/m<sup>2</sup> can be applied in one working operation even on vertical surfaces and ceilings without any loss of material.

### Airless procedure:

Equipment pressure: 50 - 60 bar

### Working temperature:

Hydrophobizing impregnation is best carried out in a temperature range between +10 °C to + 25 °C. Strong heating of surfaces by sunlight can be prevented by the use of awnings. At temperatures below +10 °C, evaporation of the carrier agent and formation of the effective ingredient may be delayed.

### Rain tight:

Approx. 30 minutes after application

## Notes

To prevent ingredients in the product from entering the building, keep all windows, doors and other openings closed during impregnation work. After the impregnation agent has dried, ventilate living space thoroughly.

## Testing the effectiveness

Water absorption on cementitious building elements can be determined before and after the hydrophobizing impregnation measures have been carried out with the Funcosil Test Plate (Art. No. 0732)

or with a test tube developed by Professor Karsten (Art. No. 4928). Testing should be executed 6 weeks at the earliest after the hydrophobizing measures have been carried out and the measured data recorded.

## Tools, cleaning

Airless equipment lambskin roller, wide brush and.

### Airless nozzles:

No. 523; 50° spraying angle; bore 0.023 inch

No. 421; 40° spraying angle; bore 0.021 inch

Tools must be clean and dry. After use and before longer pauses, clean thoroughly with water and/or spirit.

## Packaging, application rate, shelf-life

### Packaging:

5 and 30 litre plastic containers

### Application rate:

Concrete: approx. 0.2 l/m<sup>2</sup>

The amount required for calculation and tender should be determined on a sufficiently large trial surface (1-2 m<sup>2</sup>). The effectiveness of the impregnation can also be tested on this surface.

### Shelf-life:

At least 12 months stored cool but frost-free in unopened, original containers. Storage temperature should be between 0° and 30 °C.

## Safety, ecology, disposal

Further information on safety when transporting, storing and handling as well as 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. Dräger). For suitable protective gloves, see Safety Data Sheet. Wear closed work clothes.**

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| <b>1119-CPD-0818</b>  |   |
| <b>EN 1504-2</b>  |   |
| Surface protection product<br>Water repelling impregnation                          |   |
| Penetration depth   | Class II: $\geq 10$ mm  |
| Water absorption and alkali resistance  | Absorption coefficient $< 7.5$ % compared to untreated sample $< 10$ % in alkali solution |
| Rate of drying  | Class I: $> 30$ %   |
| Mass loss after alternating frost-de-icing salt load                                | Mass loss 20 cycles later than with samples not impregnated                               |
| Hazardous substances  | In accordance with EN 1504-2, 5.3   |



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