SILIKAL® RE 42

Super low viscosity and pressure-water-resistant concrete primer to prevent rising moisture

Expect more from your floor.

Product properties:

- excellent penetration capabilities into concrete / floor screed (grip and surface roughness of the underground are maintained.),
- not film forming,
- permanent sealant (withstands water pressure),
- improves the mechanical properties of concrete surfaces (abrasion resistance, tensile strength),
- steam brake, CO_2-diffusion brake,
- high chemical resistance (oil, grease, kerosene, etc.),
- prevents penetration of chlorides etc.,
- easy-to-clean surface,
- UV resistant,
- simple and quick application,
- short waiting time,

Applications:

Curing:

- curing of floor screed and green concrete,
- reduction of plastic shrinkage cracks as a result of early drying-out,
- reduction of the deformation behavior of concrete- or floor screed (shrinkage etc.),
- layers of suitable paintings and coatings can be added soon

Pore filling primer:

- For priming backside moisture penetrated concrete- or floor screed elements,
- layers of suitable paintings and coatings can be applied shorty after RE 42 application.

Surface protection:

- Surface protection of concrete- or floor screed elements,
- improving of the mechanical specific values,

Colour	Transparent
Packaging	In 20 kg and 5 kg combination package containers.
Shelf Life	Both components can be stored for 12 months if kept dry and cool in the original unopened packagings.
Mixing ratio	100 parts by weight component A 28 parts by weight component B
Air- and underground temperatures	Min. +8 °C (min. +3 °C above dew point, max. +30 °C)

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Preparation

Curing

The surface of the green concrete or floor screed must be clean and free of laitance and/or standing wetness. The surface must be dry, so that the substrate is sufficiently absorbent. The substrate must be clean and free from debris, loose or flaking material and dust.

Pore filling primer

The surface must be clean and free from debris, loose or flanking material and laitance. The surface must be free from contamination such as oil, grease, dust, loose particles, organic growth and other separating substances. The surface must be dry, so that the substrate is sufficiently absorbent.

Surface protection

Before beginning the work, the substrate has to be checked for load carrying capacity. It has to be prepared with a suitable process (milling, ball blasting, sandblasting, etc.).

The surface preparation determines grip, surface roughness and the quality that can be obtained for the surface to be impregnated.

The surface must be clean and free from debris, loose or flanking material and laitance. The surface must be free from contamination such as oil, grease, dust, loose particles, organic growth and other separating substances. The separation-stability of the surface must be at least 1,5 N/mm².

Extreme blow-holes or imperfections should be filled to eliminate surface-defects. For this purpose a scraped-filler on the basis of Epoxy, Epoxy Cement Concrete, Polymer Cement Concrete or with cement based mortar should be carried out before impregnating with SILIKAL® RE 42 . After the impregnation with SILIKAL® RE 42, clean cement based mortars should not be used.

Mixing

SILIKAL® RE 42 consists of a base- and a hardener component, which are delivered in the correct, co-ordinated mixture. Empty the entire hardener (component B) into the base container (component A) and mix thoroughly with an electric drill. Mix for at least 2 minutes until a uniform consistency is obtained. The mixed material has to be poured into a clean container and has to be mixed once again.

Application

Irrespective of the application field, the application of SILIKAL® RE 42 may be carried out in two steps:

1. application step:

Pour out the mixed epoxy resin onto the concrete surface and spread it with a rubber lip. After a short operating time (appr. 10 minutes) the epoxy excess must be removed with the rubber lip. The remaining epoxy resin can be rolled out with a lint free, epoxy resin proof roller.

Heavy films as well as the building of puddles have to be avoided!

The waiting time between the coats depends on the absorbency of the substrate and is normally between one and three hours. Before applying the second coat if required, the impregnation of the first coat into the substrate should be evident.

2. application step:

See the first application step.

Heavy films as well as the building of puddles have to be avoided!

Before the application of SILIKAL® RE 42 on power floated industry floors the application method must be verified with the manufacturer.

During application of SILIKAL® RE 42 take care that there is no film building at the surface. The surface texture has to be maintained after every coating.

Air- and underground temperatures

Minimal +8 °C (at least, however, +3 °C over the dew point), maximal +30 °C

Estimating

Normal material consumption is between 100 and 200 g/m² for the first coat and between 50 and 150 g/m² for the second coat. The material consumption depends on the absorbency, surface roughness and moisture of the substrate as well as on the application- and ambient temperature. Therefore, carrying out a test application is be recommended to define the object-specific material consumption.

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Viscosity

SILIKAL® RE 42 is a super low viscosity material with only slightly increasing viscosity at low temperatures.

	+8 °C	+20 °C	+30 °C
Viscosity	34 mPa · s	17 mPa · s	12 mPa · s

Application time

The useful application time for the material cannot easily be judged by the rise in viscosity. Therefore, SILIKAL® RE 42 should not be applied after the indicated application times according to the ambient temperature.

	+8 °C	+20 °C	+30 °C
In container [1)]	approx. 40 min	approx. 20 min	approx. 10 min
Effused state [2)]	approx. 60 min	approx. 35 min	approx. 15 min

[1)] Material ≤ 2 kg
[2)] On the concrete floor

Curing time

The curing times of the treated surface depend on the ambient temperature and are indicated below. The temperature of the ambient air and underground should not be less than 4 °C.

	+8 °C	+20 °C	+30 °C
Curing time	> 48 hours	> 24 hours	> 12 hours

Overcoating

A SILIKAL® RE 42 treated surface can be coated with Silikal resin systems. The coating material can be applied once the surface is tacky free, or in the future.

Cleaning

The uncured epoxy resin coating can be removed from tools with appropriate solvents. The cured epoxy resin coating can only be removed mechanically.

Precaution/Waste disposal

Residual mixtures of component A and component B may not be kept in buckets after finishing the application but must be moved out of the building since the chemical reaction will generate high temperature in the resin which might lead to white smoke. Pour the resin into brick or concrete waste and wait until resin is cured safely.

GISCODE: RE 1

Hazardous material regulations: mark-duty.

For the handling of SILIKAL® RE 42 the important physical, safety-related, toxic and ecological data have to be extracted from the safety-data-sheet. The instructions for hazardous material handling should be followed. The product information and safety advices on the containers as well as the individual accident prevention regulations from the responsible employees' insurance during the application are to be noticed.

In the uncured condition SILIKAL® RE 42 is as a rule hazardous to water and is therefore not allowed to get into the sewerage, water and ground. Uncured quantities of this product are as a rule special wastes needing monitoring and must be disposed properly. After the agreement of the relevant responsible body or waste dump (brit.: disposal), cured material can disposed as house-/industrial waste.

The local bodies, for example environmental protection agency or commercial control office, have a duty to disclose information therein.

Other

Delivery only for commercial or industrial uses.

Other applicable documents	Data sheet	Page
General processing information	AVH	89 – 92
The substrate	DUG	93 – 95
Information on safety and protection	SUS	102 – 103
Storage and transport	LUT	104 – 106

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