

BEECKOSIL

Silicification-active, water-repellent pure waterglass based one-component mineral paint acc. to VOB DIN 18363/2.4.1. Extremely weather and UV resistant.



Ranges of Application:

Ready-to-use waterglass paint for mineral facades, especially for recoatable lime and lime based cement plasters, porous natural stone, lime sandstone and brick, see Surface and Pretreatment. Extremely silicification-active and of classical mineral nature. Non-film forming. Available in more than 300 non-fading mineral color tones.

Processing:

Carefully stir up BEECKOSIL before use.

For use as a base coat, thin BEECKOSIL with 10 to 20% BEECK FIXATIVE. Top coat no sooner than 12 hours later, thinned with max. 5% BEECK FIXATIVE. Apply crosswise sparingly, evenly and lap-free with a soft mineral paint brush, a lambskin roller or by spray gun. Treat adjacent surfaces all at once. Avoid dry seams.

In case of high surface saturation, thin the top coat with abt. 5% water instead of using FIXATIVE for diluting. Use on prepared surface only, e.g. etched and pre-fixed new plaster, see Surface and Pretreatment. Minimum temperature: +5°C air and surface during processing and drying. Do not use on heated surfaces.

Technical Features:

Unlike organically bound coatings, such as synthetic dispersion or silicone resin emulsion paints, BEECKOSIL does not set physically by „bonding“, but through silicification – the chemical reaction between mineral surface, filler and potash waterglass.

Not only for ecological and economical reasons but also from a building physics and durability point of view film forming coating systems should be avoided on mineral surfaces. Already after a few coating intervals the excess thickness of organic material will exceed the bearing capacity of the substrate, thus resulting in cracks, flaking and wearing of the plaster. Reconstruction will involve high costs and large quantities of hazardous waste from stripping or blasting to be disposed of.

But not so with the use of non-film forming silicate coatings: Excellent durability due to natural weathering starting at the surface, to be identified through weak chalking, in combination with a most effective self-cleaning effect. Since they can be recoated almost unlimitedly, silicate paints are the best choice from both an economical and ecological point of view. No surface film is being formed. Instead, a microporous unity of surface and coating is created that is highly silicification active.

Therefore, BEECKOSIL easily passes the BEECK stripping test proving that it meets the highest weather resistance and durability requirements.

The result is an outstanding service life, even on severely weathered facades, as well as ideal building physics properties:

Water absorption and water-vapor diffusion characteristics:

W_{24} -value: < 0.08 kg / (m²h^{1/2})
 s_d -value (H₂O): < 0.02 m

Physical/Technical Characteristics:

Density: 1.5 g/cm³
 pH value: 11
 Dynam. viscosity: 3,500 mPas
 DIN 4102: non-flammable / A2

BEECKOSIL is water-repellent, especially colorfast, economic in use, also due to its durability. The cloth-matt mineral look will increase the value of any real estate also under aesthetic aspects. Natural biocidal effect through alkalinity. Non-flammable according to DIN 4102/A 2.

Color tone:

Available in more than 300 absolutely non-fading mineral color tones acc. to BEECK COLORSIL and BEECK ANTIQUE Color Charts.

Color tone categories I-IV.

Base colors: white, white antique.

Can be toned in any ratio with BEECK FULL COLOR SILICATE PAINTS.

Drying:

Recoatable at the earliest after 12 hours. Protect fresh coatings from rain, e.g. using scaffold tarpaulin.

Yield:

On smooth, normally absorbent surfaces: approx. 0.12 l BEECKOSIL and approx. 0.02 kg BEECK FIXATIVE per coat and m².

Available Sizes: 12.5 l.

Cleaning:

Clean appliances, tools and clothes with water immediately after use.

Storage:

Lasts at least 12 months when stored cool and free of frost.

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Composition:

One-component silicate system according to DIN 18 363 / 2.4.1. Binder: potash waterglass, recovered from water, quartz sand and potash. Silicification-active fillers. Pigmented exclusively with non-fading, alkali-resistant mineral pigments. Free of solvents and biocides. Low organic content with only approx. 3.5 % artificial resin as a stabilizing additive, not as a binder!

Surface and Pretreatment:

General Requirements:

The surface must be clean, dry, solid, coatable and free of efflorescing salts. Suitable for porous, absorbent to water-repellent mineral surfaces. Check new plasters for dryness and stability. Carefully touch up open spaces and flaws to match style and structure. Coat repaired surfaces with BEECK QUARTZ FILLER (see auxiliary products).

Suitable surfaces:

► Lime plaster (PIc), Lime based cement plaster (PII), Cement plaster (PIII):

Use BEECK ETCHING FLUID for removing sinterskin from new plasters and for cleaning old plasters. Thin BEECK ETCHING FLUID with 3 to 5 parts water, apply by brush and after a few minutes carefully rinse with plenty of water.

Absorbent plasters must be prefixed with BEECK FIXATIVE thinned with 2 parts water. Superficially crumbly or sanding, but recoatable plasters should be solidified by flow coating several times to saturation.

► Natural stone, brick:

Clean with high pressure and check for recoatability, absorbency and efflorescences (e.g. salt marks). Repair crumbly stones and joints. Prefixate or flow coat weakly efflorescing surfaces with BEECK SILANE PRIMER N to saturation.

► Lime sandstone, Aerated concrete:

Check and clean, then flow coat with BEECK SILANE PRIMER (indoors with BEECK INSULATING PRIMER). For aerated concrete use BEECK QUARTZ FILLER as a base coat.

► Chalking silicate and lime coatings:

After high-pressure cleaning and brushing, solidify with BEECK FIXATIVE thinned with 2 parts water.

Strip or blast old artificial resin based coatings down to the pores. Further treatment, if any, with BEECK BONDING COAT or BEECK QUARTZ FILLER.

Deficient surfaces require a special preparation.

Unsuitable are gypsum or clay based surfaces that hardly silicify or that have been treated to form film. The base e.g. of historical buildings exposed to salt should

be renovated using a renovation plaster system acc. to WTA¹⁾ directive. Intermediate coating e.g. with BEECK QUARTZ FILLER.

¹⁾ WTA Scientific-Technical Association for Building Maintenance and Monument Preservation, non-profit organization.

Auxiliary products:

BEECK ETCHING FLUID for removal of sinterskin from new plasters and for cleaning old plasters.

BEECK QUARTZ FILLER P fiber-reinforced slurry powder additive for grain-enriched base and intermediate coats.

Mix 1 container BEECKOSIL of 12.5 l with 4 kg BEECK QUARTZ FILLER P and thin with approx. 2 to 4 kg BEECK FIXATIVE. Apply evenly with a mineral paint brush. BEECK QUARTZ FILLER silicate based, fiber-reinforced slurry base coat for covering hair cracks and minor structural deficiencies. Non-film forming and extremely long-lasting. Apply by brush.

A subsequent hydrophobic treatment with BEECK BS Plus is recommended outdoors for aesthetic and economical reasons especially for high-quality building materials and in case of increased rain and dirt loads. Has proven to reduce the absorption of water and noxious substances long-term while maintaining the diffusion capacity [$W \cdot s_d < 0.005 \text{ kg}/(\text{mh}^{1/2})$]. Through optimum building protection, including an excellent water-repellent effect, it keeps the coating attractive for a long time and significantly prolongs renovation intervals while increasing the aesthetic and economical value of any real estate.

Saturating flow coating of new silicate coatings with BEECK BS PLUS no sooner than after 7 to 10 days to allow for silicification to complete.

Safety Instructions and Disposal:

► Hazard Class: not subject to identification requirements under Toxic Chemicals Ordinance/EC Directive. BEECKOSIL is alkaline. Protect skin and eyes from contact. Carefully cover all surfaces not to be treated, especially glass, ceramic and anodized surfaces. In case of accidental contact, immediately rinse with plenty of water. Keep out of the reach of unauthorized persons.

Disposal of product remainders according to legal regulations. Disposal of empty containers through resource collection points.

► Waste Code: Product and Product Remainers (European Waste Code): 080199 (Coatings).

It is our objective to provide, through this technical information, advice based on our skills and practical experience. Any instructions given are non-binding and do not release the user from his or her liability to check for product suitability and application methods him/herself with regard to the surface used. Technical modifications may result from product development. Upon publication of a revised or new version, these instructions will automatically lose their validity. The details contained in the EU Safety Data Sheets in their current form dictate liability for classification in terms of the Hazardous Substances Regulation, disposal etc.