



Beecko-SOL Fine

Sol-silicate paint for mineral and for synthetic resin coated façades

1. Product Properties

Solvent free, silicate emulsion paint modified with silica sol in accordance with VOB/C DIN 18363 2.4.1. Silicification, the chemical reaction between substrate and potassium water glass, produces a microporous unit, inseparably bonded with the substrate. The mineral pigmentation is also optimally incorporated.

The perfect adhesion and silicification, even on critical, water repellent and synthetic-resin coated façades enables cost-effective mineral coating solutions with optimum durability. Silica-sol silicate system for universal use on firm lime and cement render, concrete and brick façades. Also ideally suitable for external thermal insulation composite systems (ETICS) and weathered, matt emulsion and silicone resin coatings. Beecko-SOL enables matt renovation coatings with maximum water vapour permeability and mineral profile.

BEECKASF®
Aktiv Silikat Formulierung

1.1. Composition

- Pure mineral potassium water glass
- Silica sol
- Mineral pigments: lightfast and of natural origin
- Organic content < 5% (VOB/C DIN 18363 2.4.1.)
- Solvent free

1.2. Technical properties

1.2.1. Overview

- Use on façades
- BEECK ASF® Active Silicate Formulation
- Highly adherent even on synthetic-resin based substrates
- Low tension
- Matt, mineral surface
- Highly opaque
- Maximum colourfastness A1 (BFS leaflet No. 26)
- Nonflammable
- Highly water vapour and CO₂ permeable
- Valuable building physics properties
- Natural alkalinity helps to prevent algae and mould

1.2.2. Important building physics characteristics*

| Parameter | Value | Conformity |
|--|---|------------------------------|
| Density 20°C: | 1.44 kg / L | |
| pH value 20°C: | 11 | |
| Dynamic viscosity 20°C: | 5,000 mPas | |
| W ₂₄ value: | 0.08 kg / (m ² h ^{1/2}) / class W3 | EN 1062-3 |
| s _d value (H ₂ O): | 0.01 m / class V1 | EN 1062-1 |
| Colourfastness**: | Class A1 | BFS Information Sheet No. 26 |
| Gloss level at 85°: | dull matt | EN ISO 2813 |
| Flammability class: | A2 nonflammable | EN 13501-1, DIN 4102 |
| VOC content (max.): | 2 g / L | ChemVOCFarbV, Cat. A / c |

* applicable to White | ** applicable to tinted

1.2.3. Colour

- White and Off-White and ready-mixed in the 200 mixed colours of the BEECK Mineral Paints Card.
- Tintable in pastel colours with BEECK Universal Full Colour Silicate (colour groups I, II), and as a full colour coating.
- Different technical and building physics characteristics are possible if using full colours (colour groups III, IV).
- Due to the heating effect, only use light colours (lightness value LV > 40) on ETICS.

2. Use

2.1. Substrate requirements

- The substrate must be clean, dry, firm and stable and must be free from efflorescent and separating substances.
- Suitable substrates are: mineral, porous, absorbent, water repellent as well as organically bonded surfaces with at least partly mineral character.
- If applying on new render, ensure sufficient life, drying and curing.



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- Carefully make good chips and misses with the same type of material and the same texture.
- Use plaster to repair cracked substrates. If surfaces have local areas of filler or hairline cracks, pre-treat by coating over the whole area with BEECK Bonding Coat Coarse; alternatively, with BEECK Beecko-SOL Coarse in case of minor structural defects.
- Critical and algae infested substrates: depending on the requirement, prepare first by applying BEECK Fungicide, BEECK Quartz Filler, or BEECK Bonding Coat Fine / Coarse to the whole surface. Try out on a test area on site.
- Ensure uniform substrates and careful application on visually high-quality surfaces and in glancing light.

2.2. Brief information on the standard system

- Apply two coats of Beecko-SOL Fine.
- Add BEECK Fixative to optimally adjust Beecko-SOL Fine to the substrate and use.
- Can also be precoated with Beecko-SOL Coarse; topcoat in same colour with Beecko-SOL Fine.
- An additional intermediate coat of Beecko-SOL Fine or Coarse is advisable on surfaces exposed to the weather and where there is no roof overhang, e.g. on church towers or noise barriers.

2.3. Substrate and preparatory treatment

- **Old film-forming coatings, synthetic resin renders, external thermal insulation composite systems (ETICS):**

Remove cracked, less adherent and glossy film-forming old coats as pore-deep as possible. Check the adhesion and firmness of matt, weathered coatings, brush off chalking mineral coatings. Use high-pressure methods to thoroughly clean firmly adhering coats and renders. Prepare algae infested façades with BEECK Fungicide according to the factory specifications, see auxiliary products. Prime absorbent, chalking or crumbling surfaces with BEECK Fixative, thinned with 2 parts water. Use BEECK Bonding Coat Fine / Coarse or BEECK Quartz Filler if necessary. Information on façade cleaning:

As synthetic resin renders swell if they absorb water and are slow to dry again, allow for sufficiently long waiting periods between cleaning and coating. Clean composite systems, insulating renders and similar pressure-sensitive surfaces gently, without damaging the material. Critical, unknown and highly algae infested substrates: try out on a test area on site.

- **Lime render (PI/CSII), lime-cement render (PII), cement render (PIII):**

Check drying and strength of render. Use BEECK Etching Fluid to remove sinter skin on solid new render. Do not etch thin coat renders and composite materials (for example, ETICS). Prime absorbent render with BEECK Fixative, thinned with 2 parts water. Superficially sanding but nonetheless firm renders: saturate several times with 1 part BEECK Fixative and 5 parts water. Check pure air-lime renders for stability.

- **Concrete, fibrated cement:**

Use high pressure cleaner and BEECK Formwork Oil Remover according to the factory specifications to clean concrete pore-deep and to remove any residual release agent, and then rinse with plenty of clean water. Prime with BEECK Fixative, thinned with 2 parts water. Coat over entire made good façade with BEECK Quartz Filler or BEECK Bonding Coat Fine / Coarse as required. Prime fibrated cement with BEECK Silane Primer and BEECK Bonding Coat Fine / Coarse, try out on a test area.

- **Natural stone, brick, calcium silicate masonry:**

Clean thoroughly, check for moisture damage and efflorescence (e.g. salt edges, iron salts) and make good defective joints and bricks. Preset absorbent substrates with BEECK Fixative, thinned with 2 parts water. Flow coat weakly efflorescent substrates and aerated concrete with BEECK Silane Primer. Use BEECK Quartz Filler as required.

- **Unsuitable substrates** are horizontal or sloping surfaces exposed to the weather, less stable, efflorescent surfaces and non-alkali-resistant substrates such as wood-based materials (MDF, OSB), clay or loam, gypsum, and plastics as well as glossy, pore-free, non-firm and plasto-elastic coatings.

- **Defective substrates** require a differentiated approach. Apply a renovation render to damp, salt contaminated surfaces and base areas, and treat the whole surface with BEECK Quartz Filler.

2.4. Application instructions

2.4.1. General information

Check substrate suitability as required (see 2.1 and 2.3). Pay particular attention to the absorbency, strength and texture of the respective substrate. Try out on a test area before using on high quality and critical surfaces. Ensure that the product is used by qualified persons.

- Carefully cover surfaces which are not to be treated – especially glass, ceramics, window sills, expansion joints, lacquer and anodic coatings and protect them from splashes.
- Provide personal protective equipment.
- Only use containers from the same production batch to coat self-contained areas.
- Stir Beecko-SOL Fine thoroughly with a powered mixing paddle before use.
- Add BEECK Fixative to Beecko-SOL Fine to make it optimally coatable.



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- Do not use in wet conditions, if there is a risk of frost, on heated surfaces or in the blazing sun.
- Minimum application temperature: +8°C
- Drying time: at least 12 hours per coat
- Protect fresh coatings from the rain; hang up scaffolding sheeting in front of the surface worked on.

2.4.2. Application

With roller, brush or using an airless spraying method. Apply on self-contained areas with an absolutely thin coating, free from overlapping and uniformly in one cross coat.

- **Application with roller or brush:**

- Rollers and brushes with an even coating finish are suitable.
- Avoid roller edges, ridges, overlapping and overcoating coats that have already begun to dry, especially in scaffold working areas.
- Cut-in edges smoothly and seamlessly, wet-on-wet, together with the main area.
- As a brushed surface, use a BEECK Mineral Paint Brush to spread without brushing in any particular direction.
- Coats:
 1. *Primer coat:* depending on the substrate and application method, mix with around 5 % - 15 % BEECK Fixative to make optimally coatable.
 2. *Topcoat:* After at least 12 hours, unthinned or made coatable with around 5 % BEECK Fixative.

- **Spraying method (airless):**

- Nozzle: 0.79 mm / 0.031 inch
- Always sieve the product before use.
- Apply evenly in a thin coat, subsequently smoothing over evenly with a brush or roller.

2.5. Auxiliary products

- BEECK Fixative, Primer and Thinner. Use BEECK MBA-Fixative on water-repellent surfaces.
- BEECK Etching Fluid for removing sinter layers on solid new render. Do not etch thin coat renders and composite material (ETICS), please refer to the technical data sheet and safety data sheet.
- BEECK Fungicide against algae infestation. Use according to the factory specifications. Determine effectiveness of the fungicide on specific property beforehand by trying out on a test area on site exposed to long-term weathering.
- BEECK Silane Primer, water-repellent primers for reducing moisture transport and salt efflorescence.
- BEECK Bonding Coat Coarse / Fine on critical, e.g. smooth or water repellent substrates. Slurrying effect with "coarse".
- BEECK Quartz Filler P, fibre reinforced powder slurry additive for coarse-grained primer and intermediate coats. Add 4 kg BEECK Quartz Filler P to a bucket of Beecko-SOL Fine (15 L) and dilute with around 2 kg BEECK Fixative. If higher filling power is required, 8 kg BEECK Quartz Filler P and around 2 kg BEECK Fixative can also be added. Apply smoothly and seamlessly with a brush.
Alternatively:
- BEECK Quartz Filler, fibre reinforced, slurry silicate priming coat for covering hairline cracks and minor structural defects. Apply over whole surface with the brush. As a filled primer or intermediate coat, BEECK Quartz Filler can also be mixed 1:1 with Beecko-SOL Fine. Topcoat: in the same colour with Beecko-SOL Fine.
- Beecko-SOL Coarse, with texture grain (0.4 mm) for coarse-grained primer and possible intermediate coatings.
- Topcoat: in the same colour with Beecko-SOL Fine.

3. Application Rate and Container Sizes

The application rate, i.e. the quantity required for smooth, normally absorbent substrates is approx. 0.13 L Beecko-SOL Fine per m² and pass. Determine substrate-related application rate differences on site.

Container sizes: 5 L / 15 L

4. Cleaning

Thoroughly clean equipment, tools and soiled clothing with water immediately after use.

5. Storage

Stored cool and frost-free can be kept for at least 12 months.

6. Hazard notes, safety instructions and disposal

Comply with the EC Safety Data Sheet. Safety data sheet available on request.

Precautionary statements: Do not get in eyes, on skin, or on clothing. Keep out of reach of children. Wear eye/face protection. The product is alkaline. Do not breathe vapours, spray-mist and dust. Carefully protect the



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area surrounding the surface to be coated, wash off splashes immediately with water. Disposal in accordance with the official regulations.

Waste disposal number: 080112

7. Declaration

This technical information is offered as advice based on our knowledge and practical experience. All information is provided without guarantee. It does not release the user from their responsibility to check the product suitability and application for the specific substrate on which it is to be used. Subject to change without notice as part of our product development. Non-system additives for tinting, thinning, etc. are not permitted. Check the colours before use. This information sheet automatically becomes invalid when a new edition is issued. The information in the current version of the EC Safety Data Sheets is binding for classification according to the Hazards identifications, disposal considerations, etc.