

Beeckosil Fine

Extremely durable active silicate paint based on pure water glass for maximum silicification activity. Extremely water vapour permeable, and weather and UV resistant

1. Product Properties

Ready-to-use one-pack silicate system with BEECK ASF® Active Silicate Formulation for façades. According with VOB/C DIN 18363 2.4.1. Ideal for mineral substrates such as lime and cement renders or plasters, concrete, brick and calcium silicate masonry. With a classic mineral profile and timeless aesthetic quality. Can be used for both conservation of listed buildings and for contemporary architecture. Beeckosil Fine contains silicifiable potassium water glass as a binder. Silicification, the chemical reaction between mineral substrate, pigments and potassium water glass does not produce a surface film, but instead a microporous inseparable unit of substrate and coating. Optimum silicification also produces ideal building physics properties. Maximum colourfastness A1 in accordance with BFS Information Sheet No. 26 thanks to its pure mineral pigmentation!



1.1. Composition

- Pure mineral potassium water glass
- Alkali-resistant mineral pigments: lightfast and of natural origin
- Organic content < 5% (VOB/C DIN 18363 2.4.1.)
- Free from solvents, biocides and preservatives

1.2. Technical properties

1.2.1. Overview

- Use on façades
- BEECK ASF® Active Silicate Formulation
- Outstandingly long lives and value retention
- Extremely water vapour permeable, ideal building physics properties
- Capillary-active and moisture regulating
- Free from thermoplasticity
- Aesthetic matt
- Maximum colour stability in all shades
- Nonflammable
- Natural alkalinity helps to prevent algae and mould

1.2.2. Important building physics characteristics*

Parameter	Value	Conformity
Density 20°C:	1.50 kg / litre	
pH value 20°C:	11	
Dynamic viscosity 20°C:	4,500 mPas	
W ₂₄ value:	< 0.08 kg / (m ² h ^{1/2})	
s _d value (H ₂ O):	< 0.02 m	
Colourfastness**:	Class A1	BFS Information Sheet No. 26
Grain size:	fine	EN 13300
Gloss level at 85°:	dull matt	EN ISO 2813
Flammability class:	A2 nonflammable	EN 13501-1, DIN 4102
VOC content (max.):	4 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 Paint Colour Chart.
- Colour groups: I – IV
- Tintable and full colour coatings with BEECK Full Colour Silicate Paints.

2. Use

2.1. Substrate requirements

- Can be used on porous, absorbent to water-repellent mineral, silicifiable substrates.
- The substrate must be clean, dry, firm and stable and must be free from efflorescent and separating substances.
- Test new render for drying and strength.
- Carefully make good chipped surface, cracks and misses with the same type of material and the same texture.



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- Use render to repair cracked substrates. Completely precoat the whole surface, where hairline cracks and minor structural defects exist, using BEECK Quartz Filler or Beeckosil Coarse.
- Gently clean pressure-sensitive surfaces.
- Prepare algae infested façades with BEECK Fungicide according to the factory specifications.
- Ensure uniform substrates and careful application on visually high-quality surfaces and in glancing light.

2.2. Brief information on the standard system

- Double coat with Beeckosil, White or tinted.
- Primer and possible intermediate coat, optionally with Beeckosil Fine or Coarse, same colour topcoat with Beeckosil Fine.
- Optimally adjust and thin Beeckosil Fine with BEECK Fixative to the substrate and use.
- Use BEECK Silane Primer, BEECK Quartz Filler and/or BEECK Bonding Coat Fine / Coarse to apply a primer coat to critical surfaces if required.
- Optional subsequent long-term preservation with BEECK SP Plus, see Auxiliary Products.

2.3. Substrate and preparatory treatment

- **Lime render (PI/CSII), lime-cement render (PII), cement render (PIII):**
Examine drying and strength of render. Use BEECK Etching Fluid to remove sinter skin on solid render, or grind off. Do not etch thin coat renders and composite systems (for example, ETICS). Prime absorbent render with BEECK Fixative, thinned with 2 parts water. Mix 1 part BEECK Fixative and 5 parts water and use to flow coat renders with surface sanding, but which are still firm, several times until saturated. 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. Use BEECK Quartz Filler to coat the whole surface of made good areas. 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, aerated concrete:**
Clean thoroughly, check for moisture damage and efflorescence (e.g. salt edges, iron salts) and make good defective joints and bricks. Prime 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.
- **Existing coats, synthetic resin render, external thermal insulation composite systems (ETICS):**
Thoroughly clean old mineral coatings, brush off. Remove cracked, less adherent and film-forming old coats as pore-deep as possible. Check remaining coats for adhesion, firmness and intactness. Clean firmly adhering, matt coatings and renders. Use BEECK Fungicide according to the factory specifications to prepare surfaces infested with algae. Prime absorbent, chalking and crumbling surfaces with BEECK Fixative, thinned with 2 parts water. Highly adherent, white primer coating with BEECK Bonding Coat Fine / Coarse. In case of hairline cracks or minor structural defects, precoat the whole surface of the façade with BEECK Quartz Filler or Beeckosil Coarse, try out on a test area first. Use only light colours with lightness value (LV) > 40 on external thermal insulation composite systems (ETICS).
- **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 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 only.

- 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.
- Ensure an even substrate, a sufficient number of qualified workers and a smooth, uninterrupted coating process for tinted and full coloured coats.
- Stir Beeckosil Fine thoroughly with a powered mixing paddle before use.
- Add BEECK Fixative to Beeckosil Fine to make it optimally coatable.
- Do not use in wet conditions, if there is a risk of frost, on hot surfaces or in the blazing sun.



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- Minimum application temperature: +8°C
- Drying time: at least 12 hours per coat
- Protect fresh coats against rain and the blazing sun; 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 to self-contained areas with an absolutely thin coating, no overlapping and uniformly in one continuous pass as a cross coat.

- **Application with roller or brush:**
 - Rollers and brushes with a uniform coating pattern 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 distribute without brushing in any particular direction.
 - Coats:
 - Primer coat:* Thin primer and possible intermediate coat depending on substrate and method with 10 % - 20 % BEECK Fixative.
 - Topcoat:* After at least 12 hours, unthinned or improve coatability with no more than 5 % BEECK Fixative.
- **Spraying method (airless):**
 - Nozzle: 0.79 mm / 0.031 inch
 - Always sieve the product before use.
 - Apply uniformly and as a thin coat, then use a brush or roller to uniformly lay-off.

2.5. Auxiliary products

- BEECK Etching Fluid for removing sinter layers on solid new plaster. Do not etch thin coat renders or ETICS.
- BEECK Fungicide against algae infestation. Use according to the factory specifications.
- BEECK Fixative, Primer and Thinner.
- BEECK Silane Primer reduces moisture transport and salt efflorescence on critical substrates.
- BEECK Bonding Coat Fine / Coarse (0.4 mm), as white primer coat with excellent adhesion on surfaces such as synthetic resin render.
- BEECK Quartz Filler P, fibre-reinforced powdery slurry additive for primer and / or intermediate coats. Mix 4 kg BEECK Quartz Filler P with a 12.5 L (15 L) bucket of Beeckosil Fine and thin with around 2 kg BEECK Fixative. If higher filling power is required, 8 kg BEECK Quartz Filler P and around 3 kg BEECK Fixative can also be added. Apply smoothly and seamlessly using a BEECK Mineral Paint Brush. Same colour topcoat with Beeckosil Fine.
- BEECK Quartz Filler, fibre reinforced, slurry priming coat for covering hairline cracks, made good render and minor structural defects. Apply over whole surface with the brush. BEECK Quartz Filler can also be mixed 1:1 with Beeckosil Fine as a coarse-grained primer or intermediate coat. Same colour topcoat with Beeckosil Fine.
- Beeckosil Coarse, as primer coat with texture grain (0.4 mm). Same colour topcoat with Beeckosil Fine.
- BEECK SP Plus, long-term preservation for representative façades, screen walls and noise barriers. Apply thick flow coat of BEECK SP Plus to fresh silicate coatings after at least 10 days.

3. Application Rate and Container Sizes

The application rate, i.e. the quantity required for smooth, normally absorbent substrates is approx. 0.12 L Beeckosil Fine per m² and pass. Try out on a test area on site to determine substrate-related application rate differences.

Container sizes: 5 L / 12.5 L / 15 L

4. Cleaning

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

5. Storage

Stored cool and frost-free in the original container, Beeckosil Fine 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: Keep out of reach of children. Do not get in eyes, on skin, or on clothing. Wear eye/face protection. The product is alkaline. Do not breathe vapours, spray-mist and dust. Carefully protect the area surrounding the surface to be coated, wash off splashes immediately with water. Disposal in accordance with the official regulations.

Waste disposal number: 080112



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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.