



Beecko-SOL historic

Titanium-oxide-free Sol silica paint for historical mineral-based and synthetic-resin-coated facades.

BEECKASF®
Aktiv SilikatFormulierung

1. Product properties

Solvent-free Sol silica system iaw. VOB/C DIN 18363 2.4.1. Silification due to the chemical reaction between the substrate and potassium silicate generates a permanent microporous bond with the substrate. The purely mineral-based pigmentation and avoidance of industrially manufactured titanium oxide as white pigment creates enhanced depth of light. Ideal for preserving the stylistic authenticity of historical facades. The paints are true to historical archetypes of classic cloth-matte, transparently appealing light strength and vividness, free of water-repellency or beading effects. When rained upon, an X-ray effect is created that renders substrate textures such as mixed masonry visible. Note uniform and/or historically authentic substrates and careful pretreatment. Sol technology permits perfect adhesion and silification even on critical, water-repellent and synthetic-resin-coated facades. Suited for lime and cement plasters, concrete, as well as weathered, matte dispersion and silicon resin paints.

1.1. Composition

- Purely mineral-based potassium silicate
- Silica sol
- Alkaline-resistant mineral pigments: light-fast and of natural origin.
- Without titanium oxide as white pigment
- Organic content < 5 % (VOB/C DIN 18363 2.4.1.)
- Solvent-free, low emissions and VOC

1.2. Technical properties

1.2.1. Overview

- Used for facade applications
- BEECK ASF® ActiveSilicaFormulation
- Timeless aesthetic, cloth-matte appearance with depth of light effect
- Titanium-oxide-free recipe appropriate for landmarks
- High adhesion even on synthetic-resin-based substrates
- Low-stress
- Cloth-matte, mineral-based finish
- Non-flammable
- Highly-permeable to water vapor and CO₂
- Natural alkalinity counteracts algae and mold

1.2.2. Important construction characteristic values

Parameter	Value	Conformity
Density _{20°C} :	1.43 kg / L	
pH value _{20°C} :	11	
Dynam. viscosity _{20°C} :	5,500 mPas	
W ₂₄ value:	> 0.5 kg / (m ² h ^{1/2}) / class W1 (high)	DIN EN 1062-3
s _d value (H ₂ O):	0.01 m / class V1	DIN EN 1062-1
Color fastness**:	class A1	BFS technical leaflet No. 26
Sheen at 85°:	dull matte	DIN EN ISO 2813
Flammability class:	A2 non-flammable	DIN EN 13501-1, DIN 4102
VOC content (max.):	2 g / L	ChemVOCFarbV, cat. A / c

* applies for white

** applies for tinted

1.2.3. Color hue

- *Lime white* opaque barite/lime pigmentation.
- Factory-tinted in 200 mixed colors iaw. BEECK Mineral Paint Colour Chart. Color groups: I – IV.
- Due to heating effect, only use light colors (HBW > 40) on thermal insulation systems.

2. Processing

2.1. Substrate requirements

- The substrate must be clean, dry, solid, and have good adhesion. It must also be free of efflorescent substances and release agents.
- Suited for mineral-based, porous, absorbent, water-repellent, and also organically-bonded surfaces that are at least partially mineral-based.
- Observe sufficient curing time, drying, and hardening for new plaster.
- Carefully repair breakouts and defects with the same material and texture.



Beecko-SOL historic

- Refurbish cracked substrates for plastering. On areas with hairline cracks and minor texture defects, apply a layer of BEECK quartz filler or bonding coat coarse over the entire surface. Caution: Substrate defects become visible when soaked through; critical surfaces may have to be replastered completely.
- Depending on need, pretreat and test the complete surface of critical and algae-infested substrates with BEECK fungicide, BEECK quartz filler, or BEECK bonding coat.
- Ensure uniform substrates and careful processing on optically demanding surfaces and in side lighting.

2.2. Abbreviated information for standard application

- Two to three coats with Beecko-Sol historic.
- Primer and possible second undercoat, optionally with Beecko-SOL historic coarse, applied by mixing BEECK quartz filler P into Beecko-SOL historic. Thin topcoat in same color hue.
- Adjust and dilute Beecko-SOL historic with BEECK fixative to optimize for substrate and processing.

2.3. Substrate and pretreatment

- **Film-forming old paint, synthetic resin plaster, thermal insulation systems:**
Remove cracked, poorly bonding and high-sheen film-forming old paint down to pores. Test matte, weathered paint for adhesion and bonding strength, brush off chalking paint. Thoroughly clean high-bonding paint and plaster with pressure washer. Treat algae-infested facades with BEECK fungicide pursuant to factory instructions, see support products. Primer absorbent, chalking, or brittle surfaces with BEECK fixative, diluted with 2 parts water. Use BEECK MBA fixative on water-repellent substrates. Apply a coat BEECK bonding coat fine/coarse or BEECK quartz filler as needed. Notes for facade cleaning: Plan for sufficiently long wait times between cleaning and painting since synthetic resin plasters swell up when absorbing water and then only dry slowly. Clean insulation systems, thermal plaster, and similar pressure-sensitive surfaces gently to preserve their integrity. Inspect critical, unknown substrates and those with heavy algae-infestation. Note unobstructed water absorption of the paint on thermal insulation systems, thin-layered plasters, etc.
- **Lime plaster (PI/CSII), lime-cement plaster (PII), cement plaster (PIII):**
Inspect plaster for dryness and strength. Remove sinter skin from solid new plaster with BEECK etching fluid; do not etch thin-layered plaster and composite materials (e.g thermal insulation systems). Primer absorbent plaster with BEECK fixative, diluted with 2 parts water. Saturate still bonding, surface-sanding plaster several times with 1 part fixative and 5 parts water. Test on purely air-hardening lime due its low internal strength.
- **Concrete, fiber cement:**
Follow factory instructions to clean concrete down to pores with pressure washer and BEECK form oil remover; remove residual releasing agent, dirt, and powder residue, rinse with plenty of clear water. Primer with BEECK fixative, diluted with 2 parts water. Depending on need, apply another coat of BEECK quartz filler or BEECK bonding coat fine/ coarse over the entire surface of repaired facades. Primer fiber cement with a coat of BEECK silan primer and BEECK bonding coat fine/ coarse, pretest.
- **Natural stone, kiln bricks, lime sandstone:**
Clean thoroughly, inspect for moisture damage and leeching (e.g. salt rings, iron salts), repair defective joints and stones. Apply an initial coat of BEECK fixative on absorbent substrates, diluted with 2 parts water. Saturate slightly leeching substrates and porous concrete with BEECK silan primer. Use BEECK quartz filler as needed.
- **Unsuited substrates** include horizontally weathered, reduced strength, leeching, gypsum or clay-based substrates, engineered woods, enamels and plastics, as well as high-gloss, pore-free, not-bonding or plasto-elastic old paints.
- **Deficient substrates** call for a differentiated approach. Apply remedial plaster on salt or moisture-damaged surfaces and footing areas and treat their entire surface with BEECK quartz filler.

2.4. Processing instructions

2.4.1. General instructions

Verify substrate suitability as defined by VOB (see 2.1. and 2.3.). Note absorption capacity, strength, and texture of the relevant substrate. Test demanding and critical surfaces. Ensure qualified processing.

- Carefully cover and protect untreated surfaces, in particular glass, ceramics, window sills, expansion joints, paint coats and anodized finishes against overspray. Supply personal protective gear.
- Paint self-contained surfaces exclusively with containers from the same manufacturing batch.
- Prior to use, thoroughly mix Beecko-SOL historic with electrical agitator.
- Optimize Beecko-SOL historic for brushing by adding BEECK fixative.
- Do not process in wet conditions or frost risk, on heated surfaces, or in full sun.
- Minimum processing temperature: +8°C
- Drying time: no less than 12 hours per coat
- Protect fresh coats against rain, hang scaffolding screen.



Beecko-SOL historic

2.4.2. Processing

With roller, brush, or with airless spray method. On self-contained surfaces, apply over-cross as a thin, uniform coat without overlap in a single pass.

- **Application with roller or brush:**

- Suited for rollers and brushes with uniform brush pattern.
- Avoid roller edges, overlaps, and drying, in particular along scaffolding levels.
- Blend in by feathering edges, wet-on-wet, together with the surface.
- As brushed finish, blend in with random stroke pattern using a BEECK mineral paint brush.
- Coats

Primer coat: Depending on substrate and application method, optimize for brushing with about 5 % - 15 % BEECK fixative.

Topcoat: After no earlier than 12 hours, apply undiluted or adjusted for brushing with about 5 % BEECK fixative.

- **Spray method (airless)**

- Nozzle: 0.79 mm / 0.031 inch
- Product must be screened prior to use.
- Apply in an even thin layer, then evenly blend in with brush or roller.

2.5. Support products

- BEECK fixative, primer, and thinner. Use BEECK MBA fixative on water-repellent surfaces.
- BEECK etching fluid, for removing sinter skins on solid new plaster. Do not etch thin film plasters and thermal insulation systems. Observe technical data sheet and MSDS.
- BEECK fungicide, against algae infestations. Process as per factory instructions. Determine effectiveness on a test surface.
- BEECK Silan primer, water-repellent primer for reducing moisture propagation and salt leeching.
- BEECK bonding coat coarse / fine, on critical, e.g. smooth or water-repellent substrates.
- BEECK quartz filler P, fiber-reinforced slurring additive in powder form for filled primer and intermediate coats. Add 4 kg of BEECK P quartz filler to every 12.5 L bucket of Beecko-SOL historic and dilute with about 2 - 3 kg BEECK fixative. Avoid hard edges by feathering in with brush. Alternatively:
- BEECK quartz filler, fiber-reinforced, slurring silica primer coat to cover hairline cracks and minor texture defects. Coat entire surface. As a filled primer coat, BEECK quartz filler can also be mixed 1:1 with Beecko-SOL historic. Topcoat in same color with Beecko-SOL historic.

3. Yield and container sizes

The yield for smooth, normally absorbing substrates is approx. 0.13 - 0.14 L Beecko-SOL historic per m² and pass. Determine substrate-related yield variances and the required number of coats on the object.

Container sizes: 5 L / 12.5 L

4. Cleaning

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

5. Storage

12 month shelf-life if stored in cool and frost-free conditions.

6. Hazard notices, safety instructions, and disposal

Note EC material safety data sheet. Material safety data sheet available on request. Keep out of reach of children. Do not get in eyes, on skin, or on clothing. Wear safety goggles/facial protection. The product is alkaline. Do not inhale vapors, airborne spray, and dust. Carefully cover areas surrounding painted surfaces, immediately wash off overspray with water. Dispose in compliance with statutory regulations.

- Waste disposal number for residual product: 080112

7. Declaration

This technical information is intended to advise you based on our findings and practical experience. All notices are non-binding. They do not relieve the user from performing their own substrate-dependent tests for product suitability and processing method. Technical changes due to product development made without notice. Third-party tinting pastes, thinners, primers, etc. are not approved. Test color prior to processing. This leaflet automatically expires when a revised edition is published. The details in the EC safety data sheets in their current version are binding for the classification as per hazmat directive, disposal, etc.