

Concrete/Stone Glaze

BEECK ASF®
Active Silicate Formulation

**Semi-transparent one-pack silicate glaze system to VOB/C DIN 18363 2.4.1.
With silicification action, therefore extremely water vapour permeable, durable and UV resistant**

Pigmented active silicate system for creative, glazed mineral surface design on fair-faced concrete and mineral plaster and render in interior and exterior areas. Also ideally suited for colourful freshening up and retouching of brick and natural stone, for example, for stone restoration work on listed buildings.

1. Product Properties

Glazed pigmentation, silicification active, silicate emulsion paint to VOB/C DIN 18363 2.4.1. Silicification, the chemical reaction between mineral substrate, pigments and potassium water glass does not create a surface film, but instead produces a microporous, inseparable unit of substrate and coating. BEECK ASF® Active Silicate Formulation provides ideal building physics properties and maximum colourfastness with pure mineral pigmentation!

BEECK Concrete/Stone Glaze enables free design options through its semi-transparent to almost opaque, mottled to homogeneous application in monochrome and polychrome colouring. Visually expressive substrates such as rough-sawn fair-faced concrete formwork or cleanly pointed fair-faced masonry can be integrated fair-faced as a glaze primer. Abstract architectural design can be achieved on solid rendered façades, on external thermal insulation composite systems (ETICS) as well as on exposed outdoor fair-faced concrete members (screen walls and noise barriers).

1.1. Composition

- Pure mineral potassium water glass
- Mineral pigments: lightfast, and alkali resistant
- Organic content < 5 % (VOB/C DIN 18363 2.4.1.)

1.2. Technical properties

1.2.1. Overview

- For use on interior surfaces and façades
- BEECK ASF® Active Silicate Formulation
- High yielding and intensely coloured
- Non film-forming, can be glazed virtually as often as required
- Unlimited lightfastness and UV resistance
- Shading suitable for listed buildings
- Bronzing due to weak surface chalking
- Water thinnable
- Nonflammable
- Free from solvents, biocides and preservatives
- Natural alkalinity helps to prevent algae and mould

1.2.2. Important building physics characteristics*

Parameter	Value	Conformity
Density _{20°C} :	1.35 kg/L	
pH value _{20°C} :	11	
Dynamic viscosity _{20°C} :	approx. 2,000 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 full coloured and tinted

1.2.3. Colour

- White glazing, Off-White and factory tinted in 200 ready-mixed colours in accordance with the BEECK Mineral Paint Colour Chart.
- Colour groups: I-IV



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- Tintable with BEECK Full Colour Silicate Paint.
- Use pastel coloured glazing only on ETICS due to heating effect (LV > 40).

2. Use

2.1. Substrate requirements

- Only suitable for vertical surfaces, not for horizontal or sloping building elements exposed to weathering or mechanical stresses such as screeds, stairs, benches, handrails, spandrel walls and tops of walls.
- The substrate must be clean, dry, firm and stable and must be free from efflorescent and separating substances.
- Test new render or plaster for drying and strength.
- Carefully make good chipped surfaces, cracks and misses with the same type of material and the same texture.
- Use render or plaster to repair cracked substrates. Precoat all over surfaces with hairline cracks, minor structural defects or different absorbencies with BEECK Quartz Filler. This also generally applies to ETICS, mineral and coloured render/plaster with only a visually homogeneous surface.
- Clean pressure-sensitive surfaces carefully.
- Prepare and re-treat 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

- Two to three glaze coats with BEECK Concrete/Stone Glaze. Determine required visual finish by trying out on a test area first. Three glaze coats are required on exposed façades and if there is no roof overhang, e.g. on fair-faced concrete walls.
- Coat the whole surface with a primer coat of BEECK Quartz Filler, with the exception of: glazed finish with visible substrate is required, e.g. on intact fair-faced concrete or natural stone.
- Optimally adjust BEECK Concrete/Stone Glaze to the substrate, use and required glaze thickness by adding water and BEECK Fixative, previously mixed 1:1.
- Silicate glazing techniques produce high-quality visual finishes. Ensure qualified use, substrate suitability and careful preparatory treatment.
- Try out coating system, glaze adjustment and technique used on test area under on site conditions.
- Final long-term preservation with BEECK Silicone Plus increases durability on weathered façades.

2.3. Substrate and preparatory treatment

- **Lime render/plaster (PI/CSII), lime-cement render/plaster (PII), cement render/plaster (PIII):**
 Test render/plaster for drying and strength. Use BEECK Etching Fluid to remove sinter skin on solid render or plaster, or grind off. Do not etch thin coat renders or plasters and composite systems (for example, ETICS). Prime absorbent render or plaster with BEECK Fixative, thinned with 2 parts water. To prepare plasters and renders whose surface is sanding, but which are still firm: repeatedly flow coat with 1 part BEECK Fixative and 5 parts water until they are saturated. Apply slurry priming coat over whole surface, with BEECK Quartz Filler as the glaze primer.
- **Concrete, fair-faced concrete, fibrated cement:**
 Use high-pressure cleaner and formwork release oil remover to clean concrete pore-deep and to remove any residual release agent, and then rinse with plenty of clean water. Rinse off thoroughly in interior areas too, try out first by wetting test area with sprayed on water! Preset absorbent substrates with BEECK Fixative, thinned with 2 parts water. Flow coat fibrated cement in area of façade with BEECK Silane Primer according to factory specifications. Always try out on a test area first due to the risk of efflorescence. Apply slurry primer coat over whole surface, using BEECK Quartz Filler as required.
- **Natural stone, brick, calcium silicate masonry, aerated concrete:**
 Clean thoroughly, check for moisture damage, salt edges and efflorescence, make good defective joints and bricks. Preset absorbent substrates with BEECK Fixative, thinned with 2 parts water. Flow coat weakly efflorescent and highly absorbent substrates with BEECK Silane Primer according to factory specifications. Apply slurry priming coat with BEECK Quartz Filler, except for deliberate fair-faced glazing.
- **Existing coats, synthetic resin plaster/render, external thermal insulation composite systems (ETICS):**
 Thoroughly clean and brush off old mineral coatings. Remove cracked, less adherent and film-forming old coats, where possible pore-deep. Check the adhesion and firmness of remaining coats. Clean firmly adhering, matt coatings and plasters or renders. Use BEECK Fungicide according to the factory specifications to prepare and re-treat surfaces infested with algae. Prime absorbent, chalking and crumbling surfaces with BEECK Fixative, thinned with 2 parts water. Apply a slurry priming coat of BEECK Quartz Filler to the whole surface. Use only light colours (lightness value LV > 40) on external thermal insulation composite systems (ETICS).
- **Unsuitable substrates** are horizontal and sloped substrates exposed to weather and mechanically strained, less stable, efflorescent substrates containing gypsum or clay or loam and non-firm and plasto-elastic existing coatings.



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- **Defective substrates** require a differentiated approach. Apply renovation render or plaster to damp, salt-contaminated surfaces, basement walls and base areas. Apply subsequent primer coat over 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, structure and texture of the respective substrate and its suitability for glazing. 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 sufficient qualified workers and smooth, uninterrupted coating process.
- Before use, stir BEECK Concrete/Stone Glaze thoroughly with a powered mixing paddle and thin with a 1:1 mixture of water and BEECK Fixative.
- Do not use in wet conditions, if there is a risk of frost, on hot surfaces or in the blazing sun.
- Minimum application temperature: +8°C
- Drying time: at least 12 hours per glaze coat
- Protect fresh coats from rain and the blazing sun; hang up scaffolding sheeting in front of the surface worked on.

2.4.2. Application

Watercolour-like coating method using classic silicate glazing techniques with BEECK Mineral Paint Brushes or Oval Glaze Brushes.

Rollers or airless spraying can also be used for efficient application.

- After applying, immediately brush wet-on-wet, with thin coat and smooth, seamless finish.
- Glaze self-contained surfaces evenly, quickly and in one continuous pass.
- Test technique and glaze adjustment on original substrate, if necessary train.
- **Preparation:**
 - Thin BEECK Concrete / Stone Glaze with a mixture of: 1 part water and 1 part BEECK Fixative, by 40% maximum, - so that the required glaze effect and colour strength is achieved.
- **Aquarelle application method:**
 - Apply 2–3 glaze coats,
 - with thin coat and smooth, seamless finish,
 - in a circular motion.
 - Allow for drying time of 12 hours per glaze coat.
 - 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.
- **Spraying method (airless):**
 - Nozzle: 0.79 mm/0.031 inch
 - Always sieve product before use. Brush over carefully, with thin coat and uniform wet-on-wet method.

- Long-term preservation according to factory specifications with BEECK Silicone Plus applied after 10 days at the earliest. Recommended for exposed façades and on screen walls and noise barriers.

2.5. Auxiliary products

- BEECK Etching Fluid for removing sinter layers on solid new plaster: Thin BEECK Etching Fluid according to factory specifications with 3 parts water, and apply with a brush. After a few minutes, clean with plenty of water. Do not etch thin coat renders or plasters or composite material (e.g. ETICS).
- BEECK Fungicide against algae growth. Apply thickly, leave to take effect at least overnight, then clean façade with high pressure hot water. To protect against reinfestation: After cleaning and drying, treat with BEECK Fungicide. Determine effectiveness on specific property by trying out on a test area on site exposed to long-term weathering.
- BEECK Fixative, Primer and Thinner. Thin with water according to factory specifications.
- BEECK Silane Primer, reduces moisture transport and salt efflorescence on façades.



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- BEECK Quartz Filler, fibre reinforced, slurry priming coat as all over glaze primer for durable silicate glazes. Covers hairline cracks, minor render, plaster and structural defects and creates a uniformly absorbent, optimally silicifiable, natural white glaze primer. Apply over whole surface with the brush.
- BEECK Silicone Plus, for long-term preservation, e.g. for representative façades exposed to heavy rain and dirt. Maintains the diffusivity, long-term and with deep action. Protects against moisture damage and building material corrosion, reduces the soiling tendency and extends renovation intervals. Saturate fresh silicate glazes by flow coating with BEECK Silicone Plus according to factory specifications after at least 10 days. Cannot be used on ETICS.

3. Application Rate and Container Sizes

The application rate is approx. 0.10 L ready-to-use thinned BEECK Concrete/Stone Glaze per m² and pass. Determine substrate and glazing related application rate differences by trying out on a test area on site, especially when using highly thinned coatings and when applying to smooth substrates.

Container sizes: 1 L / 5 L / 12.5 L

4. Cleaning

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

5. Storage

Stored cool and frost-free, BEECK Concrete / Stone Glaze can be kept for at least 12 months.

6. Safety Instructions

- Comply with the EC Safety Data Sheet. The product is alkaline. Avoid contact with skin and eyes. Wear safety glasses or goggles/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Carefully cover the area surrounding the surfaces to be coated, wash off splashes immediately with water. Keep out of the reach of children. Do not breathe vapour, spray and dust. Dispose of in accordance with the legal regulations.
- Waste code (EWC code): 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. 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 EU Safety Data Sheets is binding for classification according to the Hazardous Substances Regulations, disposal, etc.

Head office:

Louis Gnatz GmbH
 Ottostraße 13
 D-84030 Landshut

Tel. +49 871 78 05 0
 Fax +49 871 78 05 10
 www.farben-gnatz.de

Factory:

BEECK'sche Farbwerke
 Louis Gnatz GmbH
 Gottlieb-Daimler-Strasse 4
 D-89150 Laichingen

Tel. +49 7333 96 07 11
 Fax +49 7333 96 07 10
 info@beeck.com
 www.beeck.com