



Silicone Plus

Highly alkaline-resistant, long-term preservation of mineral façades

Durable hydrophobing (water-repellent) treatment of porous mineral façade building materials, suitable for mineral render, natural stone and brick. Also for exposed outdoor concrete structures, screen walls and noise barriers. Ideal for subsequent long-term preservation of BEECK ASF® Active Silicate Formulations such as BEECK Pure Crystalline Finish and BEECK Concrete/Stone Glaze. In this combination, provides optimum contemporary building protection, verifiable through long-term references! Cannot be used on external thermal insulation composite systems (ETICS) and synthetic resin render. Apply by flow coating until saturated. For commercial use only.

1. Product Properties

BEECK Silicone Plus is a solvent-borne deep-action impregnation and permanently prevents penetration of moisture into porous mineral building materials as a result of spraying, sprinkling and rainwater. By adding a hydrophobic lining to the building materials' pores to induce deep-action water repellency. Protects against capillary water absorption and therefore against water-induced building material corrosion, contaminant input and soiling. Dry building fabric has improved thermal insulation properties and is barely susceptible to algae growth. Air-borne dirt is effectively rinsed off sprayed façades with self-cleaning action. Unlike renders and coatings with "hydrophobic finish", BEECK Silicone Plus produces a deep impregnating, alkali-resistant long-term preservation of render and coating "homogeneously and seamlessly". With BEECK Silicone Plus, washing out or leaching of water-repellent additives such as calcium stearate or silicone resin emulsion. Deterioration of surface hydrophobicity is to be expected due to the natural, surface degradation of substances as part of general weathering of the façade, as well as contaminant infiltration (soot particles, dust, pollen). Cleaning and repeat impregnation around 12–15 years also protects fully exposed outdoor façades durably and economically. Water-vapour diffusion, that is to say the exchange of gaseous water vapour between the building material and atmosphere, remains effective without limitation even after hydrophobing with BEECK Silicone Plus.

1.1. Composition

- Combination of silane-siloxane based active organosilicon components
- Dissolved in isoaliphatic hydrocarbons, free from aromatic hydrocarbons

1.2. Technical properties

1.2.1. Overview

- Use only on façades
- Provides long-term protection of porous building materials against rainwater, penetration of moisture and contaminant input
- Prevents the activation and capillary transport of structurally damaging salts and discolouring ingredients
- Highly penetrative deep-action preparation
- Unsurpassed durability as long-term preservation
- For alkaline and also for chemically neutral substrates
- Non vapour retarding, valuable in building physics terms
- Does not block pores, non-thermoplastic or film-forming
- Binder free, without consolidating effect
- Encourages neither dirt nor algae
- Optimally compatible with BEECK ASF® Active Silicate Formulations, e.g. BEECK Pure Crystalline Finish

1.2.2. Important building physics characteristics

| Parameter | Value | Conformity |
|--|--|-----------------------|
| Density _{20°C} : | 0.78 kg/L | |
| Dynamic viscosity _{20°C} : | < 500 mPas | |
| W ₂₄ value: | < 0.03 kg/(m ² h ^{1/2}) | |
| s _d value (H ₂ O): | 0.03 m | |
| W*s _d value: | < 0.001 kg/(mh ^{1/2}) | |
| VOC content (max.): | 750 g/L | ChemVOCFarbV Cat. A/h |

1.2.3. Colour

- Colourless transparent
- Not visually perceptible in dry weather.



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2. Use

2.1. Substrate requirements

- Can only be used on exterior façades. Not for horizontal or sloped surfaces.
- Can be used on balanced dry, highly absorbent, porous mineral building substances, free from high water table pressure, standing or rising damp. Hydrophobing is only possible and useful on solid, mineral building fabric, not on external thermal insulation composite systems.
- The substrate must be clean, dry, firm and stable and free from separating or staining substances.
- Any associated measures to dewater and remove moisture damage must be carried out in advance, e.g. subsequent horizontal insulation, drainage or removal of defective water drainage.
- If necessary, use renovation render in case of moisture damage.
- Clean façade thoroughly using high-pressure method; in case of pressure-sensitive building materials (natural stone), carry out test in advance to determine a suitable and efficient cleaning method that does not damage the building fabric. Use cleaning agents containing wetting agents sparingly; rewash with plenty of clean water.
- Remove algae and biogenic crusts mechanically, prepare and re-treat façade with BEECK Fungicide according to factory specifications.
- After wet cleaning, dry building materials for sufficiently long time until they reach their moisture balance. Only use BEECK Silicone Plus on pore-deep dry substrates.
- Trying out on a test area of representative original substrates on site in the specific property is indispensable to test the effectiveness and to determine the application rate. The target application rate must be documented and checked during use.

2.2. Brief information on the standard system

- Clean substrate and saturate by flow coating with BEECK Silicone Plus according to factory specifications.
- Due to silicification, wait at least 10 days before impregnating fresh BEECK silicate coatings and silicate glazes with BEECK Silicone Plus.
- Ensure qualified use, substrate suitability and careful preparatory treatment. Try out beforehand on test surface under in situ conditions.

2.3. Substrate and preparatory treatment

- **Lime render (PI/CSII), lime-cement render (PII), cement render (PIII):**
Clean, use BEECK Etching Fluid to remove any sinter skin. Coat damp, salt contaminated areas of the façade with renovation render.
- **Natural stone, brick, calcium silicate masonry, aerated concrete, concrete, fibrated cement, glass blocks:**
Try out on a test area of efflorescent substrates, e.g. iron-bearing sandstones or bricks containing chloride. Test building materials for moisture and absorbency. Depending on its condition, clean substrate gently and efficiently, where possible with high-pressure cleaner. Make good defective joints and bricks. Cannot be used on glazed brick and clinker. Remove release agent on concrete pore-deep with formwork release oil remover and high-pressure cleaner, rinse with plenty of clean water. To impregnate cement joints of glass blocks, apply by flow coating BEECK Silicone Plus and before it begins to dry, wipe off the glass using dry method, carefully and completely, without residues.
- **New active silicate-based coatings, e.g. BEECK Pure Crystalline Finish or BEECK Concrete / Stone Glaze:**
Due to weather and substrate dependent silicification, after applying the topcoat, wait at least 10 days before impregnating the façade with BEECK Silicone Plus. Protect fresh flow coated façades against the rain and damp; hang up scaffolding sheeting in front of the surface worked on.
- **Unsuitable substrates** are horizontal or sloping surfaces exposed to the weather as well as building materials with high water table pressure, rising or hygroscopic damp. Also horizontal or inclined surfaces. Protect tops of walls and ledges against ponding or accumulated water and dirt deposits constructively, e.g. using sheet metal covers. As a deep-action preparation, cannot be used on glazed bricks and clinker. Solvent-swellable substrates, coats and composite materials, materials containing high levels of synthetic resin, e.g. passive silicate paints, synthetic resin renders and external thermal insulation composite systems (ETICS) are also unsuitable.
- **Defective substrates** require a differentiated approach, examine and try out on a test area first.

2.4. Application instructions

2.4.1. General information

Check substrate suitability as required (see 2.1 and 2.3). Pay particular attention here to the absorbency, strength and texture of the respective substrates. 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.
- Note and follow the safety instructions
- Provide personal protective equipment



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- Use only in well ventilated outdoor areas, never use in basements, shafts or manholes.
- Flow coat self-contained areas uniformly and all over, wet-on-wet until they are saturated. Ensure sufficient qualified workers and smooth, uninterrupted coating process.
- Do not use in wet conditions, if there is a risk of frost, on hot surfaces or in the blazing sun.
- Application temperature: + 3°C to +25°C
- Due to silicification, wait at least 10 days before impregnating fresh BEECK silicate coatings and silicate glazes with BEECK Silicone Plus.
- Protect freshly impregnated façades against rain; hang up scaffolding sheeting in front of the surface worked on.

2.4.2. Application

- Apply BEECK Silicone Plus unthinned and using flow coat method until saturated.
- Electric pumps and compression sprayers with low pressure and solvent-resistant hose are suitable and efficient; also remove nozzle if applicable. Saturating application can also be achieved by using solvent-resistant brushes on small areas and sectionalised façades.
- Thickly flow coat the material against the wall without atomisation. Watch out for drifting splashes caused by the wind. Enclose the façade if necessary.
- At an interval of approx. 20 minutes, saturate the surface twice wet-on-wet so that no more material is absorbed by the building material.
- Determine target application rate on test surface and check during use, e.g. coverage per container.
- Spread dripping, running-off material with a brush. When flow coating, keep a safe distance from the wall, avoid product running onto adjacent areas or into the ground.
- Avoid contact with joint sealants, plastics, lacquer, bituminous sheeting, etc. Cover or mask off areas carefully, rub off splashes immediately with dry cloth.

3. Application Rate and Container Sizes

The application rate, i.e. the quantity required is approx. 0.25 L – 0.8 L BEECK Silicone Plus per m², depending on the porosity of the building material. Try out on a test area on site to determine specific application rate values for each individual project. Check target application rate during use.

Container sizes: 1 L / 5 L / 10 L / 28 L

4. Cleaning

Thoroughly clean equipment, tools and soiled clothing with solvent, e.g. white spirit, immediately after use.

5. Storage

Stored cool in its original container, BEECK Silicone Plus can be kept for at least 18 months. Never transfer into containers that are not solvent resistant.

6. Safety Instructions

- Comply with the EC Safety Data Sheet. **Xn - Harmful:** may cause lung damage if swallowed. Avoid contact with skin and eyes. Repeated exposure may cause skin dryness or cracking. Do not breathe vapour/spray. Use only in well-ventilated areas. Flammable. No smoking, keep away from sources of ignition. Carefully cover the area surrounding the surfaces to be coated and protect from splashes, runs and sags, and drifting with the wind. This product is for commercial use only. Keep out of the reach of children. Avoid release into the environment. Obtain special instructions/refer to the safety data sheet for advice. Do not empty into drains. Dispose of in accordance with the legal regulations.
- Waste code (EWC code): 080111

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