



# BEECK Plaster and Stone Hardener

Colourless silica sol-based strengthening agent for mineral building materials in interior and façade areas. Water-thinnable, solvent-free.

**BEECKASF®**  
Aktiv Silikat Formulierung

## Product properties

Consolidation of open-pored, mineral building substance with a sound core, especially for weathered, leached, superficially sanding mineral plasters. Also for stucco, frescoes and bricks including mortar joints. Material consumption and substrate suitability must be tested in advance using a sample surface. Without water repellency. Ideal for subsequent colour treatment with BEECK silicate paints and glazes including BEECK pure crystalline finish. Alternatively, a final colourless long-term preservation with BEECK SP Plus provides the masonry with lasting protection against rain and weathering.

### 1.1. Composition

- Pure mineral mixture of potassium silicate (potassium water glasses), oligosilicates and low-alkali silica sol
- Organic content 0 % (VOB/C DIN 18363 2.4.1)
- Free from organic solvents, silicic acid esters, synthetic and silicone resins, preservatives

### 1.2. Technical properties

#### 1.2.1. Overview

- BEECK ASF® Active Silicate Formula
- For use in interior and on façades
- Stone-compatible silicate-mineral consolidation through silicification and deposition of silica gel
- Strengthens without film formation or pore blockage
- Capillary-active, open to diffusion, free of water repellency, maintains the sorption capacity of the building material
- Durable and weather-resistant, can be refreshed at any time
- Visually imperceptible on the building material, without scorching or gloss formation
- Not flammable or explosive, does not form flammable vapours
- Dilution level can be controlled, standard application: 2 parts solidifier diluted with 1 part water
- Natural alkalinity counteracts bacteria, algae and mold

#### 1.2.2. Important building physics parameters

Parameter	Value	Conformity
Density 20°C:	1.06 – 1.10 kg / l	
pH value 20 °C:	11	
Dynam. Viscosity 20°C:	< 450 mPas	
W <sub>24</sub> value:	> 1.00 kg / (m <sup>2</sup> h <sup>1/2</sup> )	
s <sub>d</sub> value (H <sub>2</sub> O):	0.01 m	
Flammability class:	A1 non-flammable	DIN EN 13501-1, DIN 4102
VOC content (max.):	0 g / L	ChemVOCFarbV, cat. A / h

#### 1.2.3. Color

- Dull, after drying transparent.

## 2. Preparation

### 2.1. Requirements for substrate

- Preferred application in façade areas on vertical surfaces.
- The substrate must be clean, dry, solid and load-bearing at the core and free from rising or pressing moisture. Can be used on dry, porous substrates.
- Blooming substances such as water-soluble, building-damaging and discolouring salts (sulphates, chlorides, nitrates, possibly iron salts) may only be present in traces; in case of doubt, confirm in advance by laboratory analysis and sample surfaces. Water-soluble salts may also be indicated by whitish residues that form on the surface of the building material after (test) impregnation with BEECK Plaster and Stone Hardener.
- Sampling on original substrates on site is essential to check the effectiveness, possible efflorescence and to determine the degree of dilution and consumption. The standard dilution is 2 parts solidifier diluted with 1 part water. The qualified sampling, including prior cleaning, must be specified and recorded in the service description; the consumption values determined and the consolidation success achieved are binding target specifications and calculation bases.
- Dry-brush friable surfaces, efflorescence and crusts, remove debris. A suitable, substance-preserving cleaning or blasting method must be determined in a preliminary test.
- Depending on the requirements, property-specific flanking measures may be necessary to dry out the wall, such as horizontal insulation, drainage or removal of defective water drainage. A rainproof brick, stone or sheet metal covering is recommended for wall crowns.



# BEECK Plaster and Stone Hardener

- Horizontal or inclined exterior components exposed to the weather, such as belt cornices, window sills, etc., must be made of weather-resistant building materials and cannot be sustainably protected against weathering by consolidation and/or hydrophobisation alone. If necessary, treat with BEECK SP Plus.
- Carefully repair chippings and defects in the same type and structure.
- Gently clean pressure-sensitive surfaces. If necessary, consolidate brittle building materials before cleaning.
- Pre-treat and post-treat algae-covered façades with BEECK fungicide according to the manufacturer's instructions.

## 2.2. Brief info on standard structure

- Clean the substrate and saturate with BEECK Plaster and Stone Hardener according to the instructions.
- Can be painted over after 1 week at the earliest with e.g. BEECK pure crystalline finish or BEECK concrete/stone glaze.
- Colourless long-term preservation with BEECK SP Plus as required. Apply BEECK SP Plus at the earliest 2 to 3 weeks after stone stabilisation or painting in a saturating flood application and protect from rain for 3 days.

## 2.3. Substrate and pretreatment

- **Artificial/natural stone, brick; lime plaster (CSI - II), lime-cement plaster, cement plaster, stucco, fresco, clay:** Check for porosity, absorbency and efflorescence; if suspected, determine the content of water-soluble salts that are harmful to the building. Use only on load-bearing substrates with a "sound core". Not for "bonding" already detached shells or crusts. Use a suitable, gentle cleaning method and only apply stone consolidation after the substrate has dried thoroughly. If necessary, remove lime scale with BEECK etching fluid. Brush off old mineral coatings. Blast or pickle off film-forming synthetic resin, silicone resin and dispersion coatings down to the pores. Allow clay to dry to household moisture. Sweep off sanding oversize particles dry, brush off excess.
- **Unsuitable** are, for example, building materials that are installed horizontally, in contact with the ground, subject to mechanical stress or exposed to standing / pressing / rising water, such as stone floors, stairs, plant troughs, well surrounds or embankment walls. Not applicable in the case of hygroscopic / rising damp and high content of water-soluble salts. Also not applicable on synthetic resin-containing and/or hydrophobic substrates and composite materials. Low-porosity building materials such as granite and glazed ceramics are unsuitable.

## 2.4. Preparation instructions

### 2.4.1. General instructions

- Check substrate suitability. Take into account the absorbency, water repellency (hydrophobicity), strength and structure of the respective substrate. Sample demanding and critical surfaces. Ensure qualified application.
- Carefully cover surfaces that are not to be treated - especially glass, ceramics, baseboards, expansion joints, paintwork and anodised surfaces - and protect them from splashes.
- Do not apply in wet conditions, when there is a risk of frost, on heated surfaces or in direct sunlight.
- Processing temperature: 8°C to 28°C, relative humidity 40 - 95 %.
- Drying time: Depending on penetration depth and weather conditions, subsequent coats after 1 week at the earliest. During this time, the hardened surface must be protected from rain and run-off water with scaffolding tarpaulins or an enclosure.

### 2.4.2. Preparation

- **Primer for porous, absorbent mineral substrates:**  
BEECK Plaster- and Stone Hardener is generally applied diluted 2:1 with water, i.e. 2 parts solidifier diluted with 1 part water. Higher dilution up to 1:1 with water is recommended for highly absorbent, coarse-pored, soft substrates with high penetration depth and multiple saturation. Undiluted application only on very solid, load-bearing, slightly sanding building materials. Impregnation is carried out wet-on-wet until the building material is saturated and can be repeated several times after intermediate drying times of at least 1 to 2 days. When impregnating again, the building material must be dried to the maximum impregnation depth to household moisture. If the pores are still clogged with water, there will be no deep consolidation and crust formation or even visually disturbing glazing and milky discolouration on the surface may occur. Soaking must be continued until the substrate no longer absorbs any consolidant. Apply by brushing or flooding (backpack sprayer, low-pressure pump with hose, remove nozzle if necessary), not by spraying or atomising! Carefully remove excess from less absorbent areas after a few minutes with dry brushes; the surface must be practically dry to the touch after treatment. No glazing protrusions or run-off must remain, also brush carefully in joints, recesses, on cornices, etc. Protect adjacent surfaces from run-off and splashes. Determine working method and material consumption in advance using a sample surface.

## 3. Consumption and container sizes

Depending on the substrate, consumption for priming ranges from approx. 0.4 to more than 3 l of ready-to-use thinned mixture per m<sup>2</sup>. Property-specific consumption values are to be determined based on sample surfaces, specifically on very smooth as well as very rough substrates and for glazing techniques.

Container sizes: 1 l / 5 l / 10 l



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## 4. Cleaning

Immediately clean tools and dirty clothes with water after use.

## 5. Storage

At least 12 months when stored in a cool, frost-free environment.

## 6. Hazard warnings, safety advice and disposal

Comply with the EC Safety Data Sheet. Safety data sheet available on request. 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 code for product residue: 080112

## 7. Declaration

This technical information is intended to provide advice based on our findings and experience in practice. All information is non-binding. This does not release handlers from their obligation to verify product suitability and preparation method themselves based on the substrate at hand. Subject to technical changes in the course of product development. Admixtures of third-party products for tinting, thinning, etc. are prohibited. Hues are to be checked before use. This information sheet will automatically cease to be valid when a new version appears. The information in the EU safety datasheets in their current form is binding for classification according to the Hazardous Substances Ordinance, disposal, etc.