



BEECK Universal Full Colour Silicate

Mineral pigmented full colour and tinting paint for e.g. BEECK Renosil, Beecko-SOL and BEECK Maxil

1. Product Properties

Silicifiable full colours for tinting e.g. BEECK Renosil, Beecko-SOL and BEECK Maxil. Can be used on interior and exterior areas. Also for full coloured coatings and decorative painting on prepared, uniform substrates in the respective system. Silicification, the chemical reaction between mineral substrate, pigment and potassium water glass, produces inseparable bonding with the mineral substrate. The purely mineral pigmentation enables durable, lightfast and colourfast wall and façade coatings, even on suboptimum substrates. The surface is remineralised, the moisture content and tendency to soil are reduced. To avoid heating effects, only use lightened coatings with a lightness value (LV) > 40 on external thermal insulation composite systems (ETICS).

1.1. Composition

- Pure mineral potassium water glass
- Alkali-resistant mineral pigments: lightfast and of natural origin
- Organic auxiliary agents and binders with content $\geq 5\%$
- Free from solvents, biocides and preservatives

1.2. Technical properties

1.2.1. Overview

- For use on interior surfaces and façades
- Intensely coloured in all mineral tintable shades
- Permanently brilliant, even in full colour
- Remineralises ETICS
- Aesthetic matt
- Diffusible and valuable building physics properties
- Capillary-active, prevents surface moistening
- Nonflammable
- Natural alkalinity helps to prevent algae and mould

1.2.2. Important building physics characteristics*

Parameter	Value	Conformity
Density 20°C:	1.18 – 1.38 kg / L	
pH value 20°C:	11	
Dynamic viscosity 20°C:	approx. 3,200 mPas	
W ₂₄ value:	< 0.20 kg/(m ² h ^{1/2})	
s _d value (H ₂ O):	0.08 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

* Values depend on colour

1.2.3. Colour

- 11 full colours of the BEECK Mineral Paint Colour Chart:
Black, Umber, Ochre Yellow, Maize Yellow, Lemon Yellow, Green, Cobalt Blue, Ultra Blue, Wine Red, Oxide Red, Brown.
- Can be mixed together as required as well as for tinting e.g. BEECK Renosil.

2. Use

2.1. Substrate requirements

- The substrate must be clean, dry, firm and stable and must be free from efflorescent and separating substances.
- Can be used on porous, absorbent to water-repellent, as well as organically bonded surfaces with at least partial mineral character.
- Check drying and strength of new plaster or render.
- Carefully make good chipped surfaces, cracks and misses with the same type of material and texture.
- Use plaster to repair cracked substrates. Renders with hairline cracks, residual coating and minor structural defects: precoat the whole surface with BEECK Quartz Filler. Try out on a test area on site.



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- Depending on the requirements, precoat gypsum-based and organically bonded substrates with BEECK Bonding Coat Fine / Coarse or BEECK Gypsum Primer Fine / Coarse all over according to the factory specifications.
- Clean pressure-sensitive surfaces carefully.
- Prepare algae infested façades with BEECK Fungicide according to the factory specifications.

2.2. Brief information on the standard system as a full colour coating

- Two coats of full colour paint with BEECK Universal Full Colour Silicate. Depending on the substrate, apply an additional intermediate coat for hues such as Lemon Yellow and Ultra Blue with weaker hiding power. Try out on a test area.
- Add BEECK Fixative to optimally adjust BEECK Universal Full Colour Silicate to the substrate and use.
- Depending on the substrate, apply primer coat of BEECK Bonding Coat Fine / Coarse, BEECK Quartz Filler or BEECK Gypsum Primer Fine / Coarse as required.
- Full colour coatings produce high-quality visual finishes. Ensure qualified use, substrate suitability and careful preparatory treatment. Check areas in glancing light. Try out on a test area under on site conditions beforehand.

2.3. Substrate and preparatory treatment

- **Old film-forming coatings, synthetic resin renders, external thermal insulation composite systems (ETICS):**

Remove cracked, less adherent and plasto-elastic old coats as pore-deep as possible. Check the adhesion and firmness of remaining coatings. Thoroughly clean firmly adhering coatings and plasters or renders. Use BEECK Fungicide according to the factory specifications to prepare façades infested with algae. Prime absorbent and crumbling surfaces with BEECK MBA-Fixative, thinned with 2 parts water. Use BEECK Bonding Coat Fine / Coarse as a highly adherent, white primer coat on substrates with an organic character. In case of hairline cracks, residual coatings or minor structural defects, precoat the whole surface of the façade with BEECK Quartz Filler or BEECK Bonding Coat Coarse. *Information on façade cleaning:* As synthetic resin plasters and renders swell if they absorb water and are slow to dry again, allow for sufficiently long waiting periods between cleaning and coating. Clean insulating plasters and renders and similar pressure-sensitive surfaces carefully. Use only lightened coatings with lightness value (LV) > 40 on external thermal insulation composite systems (ETICS).

- **Lime plaster/render (PI/CSII), lime-cement plaster/render (PII), cement plaster/render (PIII), concrete, aerated concrete, fibrated cement:**

Check drying and strength of plaster or render. Use BEECK Etching Fluid to remove sinter skin on solid plaster or render, or grind off. Do not etch thin coat plasters and renders and composite systems (for example, ETICS). Prime absorbent render with BEECK Fixative, thinned with 2 parts water. To prepare sanding, firm plasters and renders: repeatedly flow coat with 1 part BEECK Fixative and 5 parts water until saturated. Flow coat highly absorbent and large-pored surfaces with BEECK Silane Primer. Carefully make good chipped surfaces and misses with the same type of material and the same texture. Coat over the whole surface of partially made good façades with BEECK Quartz Filler or BEECK Bonding Coat Coarse. Take care when using full colour paints due to possible staining. Try out on a test area! 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 fibrated cement in façade areas with BEECK Silane Primer and BEECK Bonding Coat Fine/Coarse. Try out on a test area.

- **Gypsum plaster or render, gypsum board:**

Precoat gypsum-based substrates all over with BEECK Gypsum Primer Fine / Coarse. Grind off any sinter layers beforehand. Gypsum board and gypsum fibre boards are critical for full colour paints. Ensure proper installation and required surface quality and evenness tolerances under the given on site and glancing light conditions (VOB/C and quality level 3 or 4, according to good practice guide No. 2 issued by the German gypsum industry association (Bundesverband der Gipsindustrie e.V.)). To create uniform surfaces, additionally cover with fabric or nonwoven wall covering and always try out on a test area under on site conditions and in glancing light.

- **Unsuitable substrates** are horizontal or sloping surfaces exposed to the weather, less stable, efflorescent and non-alkali-resistant substrates such as wood-based materials (MDF, OSB), clay or loam as well as non-firm old coatings. Organically modified substrates must be matt, porous, water-wettable and partially mineral in character. Thermoplastic and plasto-elastic coating substrates are unsuitable.
- **Defective substrates** require a differentiated approach. Apply a renovation plaster or render to damp, salt contaminated surfaces, basement walls and base areas, and coat the whole surface with BEECK Quartz Filler.



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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.

- 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 Universal Full Colour Silicate or tinted product thoroughly with a powered mixing paddle before use.
- 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 16 hours per pass
- Protect fresh coats from rain and the blazing sun; hang up scaffolding sheeting in front of the surface.

2.4.2. Use as full colour paint

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 by cross coating.

- **Application with roller or brush:**
 - Rollers and brushes with a uniform coating finish 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 spread in any particular direction.
 - Coats:
 - Primer coat:* Thin priming coat and possible intermediate coat, depending on substrate and method, with approx. 10 % BEECK Fixative.
 - Topcoat:* After at least 16 hours, make coatable by adding 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.

2.4.3. Use as tinting paint

- Use BEECK Universal Full Colour Silicate solely for tinting e.g. BEECK Renosil.
- Before use, stir full colour paint and white paint thoroughly with powered mixing paddle.
- Tint the total quantity in one batch, e.g. in a drum or bucket.
- Only use containers of product from the same production batch to paint self-contained areas.
- Try out mixed colour on test area before use and check it matches the colour specification.

3. Application Rate and Container Sizes

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

Container sizes: 0.75 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 Universal Full Colour Silicate 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.