



# Renosil Fine & Coarse Mineral Silicate Finish

Exterior / Interior

**Easy to use, colorfast/non-fading, UV stable, silicate-based mineral paint, breathable renovation finish for renewing and re-mineralizing raw surfaces or surfaces previously coated with water based synthetic resin coatings. Also great for renewing or finishing external thermal insulation façade systems, brick façades, CMU, and stucco façades. Commonly used for restoration and renovation of historic structures because of its unique handcrafted quality, period correct formulation, breathability, durability, and its physical properties which fit the building physics characteristics of historic structures.**

## 1. Product Properties

BEECK Renosil Fine is a solvent-free one-component silicate paint system that uses a potassium silicate (water glass) binder. A chemical reaction takes place between the mineral substrate and the potassium water glass, producing uniform inseparable bonding. Renosil uses pure mineral pigmentation giving it optimum color and weathering performance. The single component system offers cost-effective easy renovations while creating a desirable mineral matte and water vapor permeable surface. The sole use of inorganic mineral pigments ensures extreme UV stability while maintaining the original color integrity. Renosil can be used universally on all raw masonry surfaces or for the renovation of synthetic resin bonded façade areas such as firmly adhering microporous old emulsion-based coatings, synthetic resin stuccos/renders and external thermal insulation systems.

### 1.1. Composition

- Pure mineral potassium water glass, produces the best breathability properties
- Inorganic pure mineral pigments: lightfast, non-fading even in the most extreme conditions
- Auxiliary agents and binder, universal bonding performance
- Water thinable, solvent free

### 1.2. Technical properties

#### 1.2.1. Overview

- Easy to use on exterior/interior façades and surfaces – excellent durability in extreme weather conditions
- Extremely high water vapor permeable (breathable) and valuable building physics properties
- Maximum colorfastness A1 (BFS leaflet No. 26) - best possible - No fading, UV stable
- Natural alkalinity helps to prevent algae and mold
- Environmentally responsible, sustainable, extremely low VOC product containing no solvents
- Re-mineralizes surfaces - make it look new again
- Very flat mineral matte - desirable appearance
- High hiding capacity – easy to refinish, no stripping ever required
- Mineral finish stays clean longer and is easy to clean when necessary
- Nonflammable – will not burn
- Pollution and acid rain resistant
- Non-film-forming – surface remains breathable
- Exceeds the strictest air quality regulations, can be applied anywhere
- Contributes to LEED

#### 1.2.2. Data Important for building physics characteristics\*

Parameter	Value	Conformity
Density 20°C:	1.45 – 1.48 kg / l	
pH value 20°C:	11	
Dynamic viscosity 20°C:	5,000 – 8000 mPas	
W <sub>24</sub> value:	< 0.12 kg/(m <sup>2</sup> h <sup>1/2</sup> ) Class III	EN1062-3
Vapor permeability (H <sub>2</sub> O):	(Best in class) 0.01 - 0.03 m, S <sub>d</sub> value	ISO 7783-2
	75 - 85 Perms	ASTM E96
V value Water vapor transmission rate	≥ 2100 (g/m <sup>2</sup> d)	EN 1062-1
Colorfastness**:	(Best in class) A1	BFS Information Sheet No. 26
Gloss level at 85°:	matte (0.5 – 1.0)	EN ISO 2813
Flammability class:	A2 nonflammable	EN 13501-1, DIN 4102
VOC content (max.): white or tinted	≤ 8-10 g / L	ChemVOCFarbV, Cat. A / c, ASTM D6886
Thermal Expansion	Matches the masonry surface	
Flash point	nonflammable	
Accelerated Weathering	pass	ASTM G154
Wind Driven rain	pass	ASTM E514

\* applicable to white | \*\* applicable to tinted

#### 1.2.3. Color

- White and all 200 colors in the BEECK Mineral Paint Color Chart
- Color groups: I – IV on the BEECK color charts
- Monochrome color shades: C-651, C-652, C-653, C-654, C-655, C-656, C-657, C-658, C-659, C-660 and C-661
- Custom color matching available. Contact BEECK about getting your color matched
- Due to thermal effects of the substrate it is recommended to only use light colors (LV > 40) on ETICS/EIFS

## 2. Use

### 2.1. Substrate requirements

- The substrate must be clean, dry, sound, and stable. It must be free from efflorescent, salts, oils and other incompatible substances
- All new plaster, stucco, render, concrete or masonry must be properly cured before painting
- Carefully patch areas needing repair with the same type of material and the same texture
- Use mortar or plaster to repair substrates with large cracks. Pretreat surfaces that have small or hairline cracks all over with BEECK Renosil Coarse, BEECK Quartz Filler for larger cracks and imperfections or BEECK Bonding Coat Coarse.
- Uniform surface and product application is important to achieve a high-quality substrate. This is most important on surfaces that receive glancing light or where surface appearance is critical.
- Horizontal and slightly sloping surfaces like sills and the tops of walls traditionally weather faster than vertical walls and may require more frequent maintenance. Additional intermediate coats of Renosil can be applied to these surfaces to extend the maintenance cycle.
- Remove, treat and rinse all algae and fungi infested surfaces. Clean biological stained façades with Beeck Mineral Paints D/2 Biological Solution according to the factory specifications.

### 2.2. Brief information on standard Renosil systems

- Apply two coats of BEECK Renosil. Additional coats extend the lifecycle of the coating
- Primer and possible intermediate coat, with Renosil Fine or Coarse, always topcoat with Renosil Fine.
- Optimally adjust BEECK Renosil Fine to the substrate texture and absorbency by adding water up to 12 oz. per gallon. Do not exceed 10%. Typically, thinning is only required for the first coat. If additional thinning is needed to compensate for extreme absorbency or texture, please contact your BEECK representative.
- Imperfect or surface damaged substrates: apply BEECK Quartz Filler or BEECK Bonding Coat Fine / Coarse over the entire surface as a pretreatment. Perform trials on site to determine the best product for your needs.
- Pretreatment with BEECK Renosil Coarse is also possible followed by a topcoat in same color with BEECK Renosil Fine.
- For surfaces exposed to severe weather, e.g. on church towers, sills or noise barriers, an additional intermediate coat of Renosil Fine or Coarse is recommended to equalize the overall weathering of all surfaces.
- Optionally treat the substrate with BEECK HBP Silane 100 for added water repellency.

### 2.3. Substrate and preparatory treatment

- **Old film-forming coatings, synthetic resin renders/stucco, external thermal insulation composite systems (ETICS/EIFS):**
  - Remove all cracked or loosely bonded old coatings.
  - Check the adhesion and soundness of all remaining coats.
  - Thoroughly clean tightly bonded coatings and renders/stuccos.
  - Check for moisture damage and efflorescence (e.g. salt edges, iron salts) and repair all defects.
  - Make repairs with proper mortar matching existing surface texture.
  - Prime highly absorbent or crumbling surfaces with BEECK MBA-Fixative, thinned with 2 parts water. Any product that remains wet on the substrate surface after 10 minutes must be removed.
  - Clean, treat and rinse all algae and fungi stained surfaces with Beeck Mineral Paints D/2 Biological Solution or a fungicidal treatment.
  - Note regarding façade cleaning: synthetic resin renders/stuccos swell when they absorb water and are slow to dry, allow for sufficiently long drying periods between cleaning and coating. Clean composite systems, insulating renders and similar pressure-sensitive surfaces gently, without damaging the material.
- **Bricks, CMU, all types of Masonry, Lime or Cement stucco/plaster/render, Concrete, GFRC and other mineral surfaces:**
  - Allow proper drying and curing of newly installed masonry.
  - Use an etching fluid to remove sinter skin on solid new mortar, render/stucco and concrete. Do not etch thin coat renders and composite materials (for example, ETICS/EIFS).
  - Clean thoroughly, check for moisture damage and efflorescence (e.g. salt edges, iron salts) and repair all defects.
  - Prime highly absorbent surfaces with BEECK Fixative or BEECK MBA fixative, thinned with 2 parts water. Any product that remains wet on the substrate surface after 10 minutes must be removed.
  - For sanding surfaces, flow coat several times wet-on-wet with the following mixture, 1 part BEECK Fixative or BEECK MBA Fixative and 5 parts water, until completely saturated. Any product that remains wet on the substrate surface after 10 minutes must be removed. Process may be repeated every 12 hours until substrate is sound.
  - Clean, treat and rinse all algae and fungi stained surfaces with Beeck Mineral Paints D/2 Biological Solution or a fungicidal treatment.
  - For formed concrete, use a high-pressure cleaner or whatever method is needed to clean concrete pore-deep and to remove any residual release agent, then rinse with plenty of clean water.
  - For best results, prime fiber cement substrates that are being used exterior with Beeck Mineral Paints HBP Silane 100 and BEECK Bonding Coat Fine/Coarse before coating with Renosil.
- **If your substrate was not listed or if you have questions contact your BEECK representative for recommended application and surface prep.**



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- **Unsuitable substrates** are large horizontal or slightly sloping surfaces exposed to the weather, walking surfaces, unstable substrates, efflorescent surfaces containing salts and non-alkali-resistant substrates such as wood-based materials (MDF, OSB), many old oil based coatings, loam, gypsum, and plastics as well as non-firm and plasto-elastomeric coatings.
- **Defective substrates** require differentiated approaches. Contact your BEECK representative regarding recommended application and surface prep for your specific condition.
  - Clean, treat and rinse all algae and fungi infested surfaces with Beeck Mineral Paints D/2 Biological Solution or a fungicidal treatment.
  - Clean thoroughly, check for moisture damage and efflorescence (e.g. salt edges, iron salts) and repair all defective joints and surfaces.

## 2.4. Application instructions

### 2.4.1. General information

Check substrate suitability as required (see 2.1, 2.2 and 2.3). Pay particular attention to the absorbency, strength and texture of the respective substrate. Prepare a trial or test area before using on high visibility and critical surfaces. Ensure that the product is applied by a qualified person.

- The substrate must be clean, dry (less than 30% humidity), sound, and stable. It must be free from efflorescent, salts, oils and other incompatible substances.
- Carefully cover surfaces which are not to be treated – especially glass, ceramics, window sills, expansion joints, lacquer and anodic coatings – protect them from splashes, drips or splatters.
- Provide personal protective equipment.
- Only use containers from the same production batch to coat self-contained or continuous surface areas.
- Before use, stir BEECK Renosil thoroughly with a power mixer. Take care not to incorporate air into the product.
- Adjust consistency of BEECK Renosil for substrate absorbency and product flow by adding clean water. Max 12 oz. per gallon or 10%. Typically, thinning is only required for the first coat. If additional thinning is needed to compensate for extreme absorbency or texture, please contact your BEECK representative.
- Do not use in rain/wet conditions, if there is a risk of frost, on hot surfaces or in the blazing sun or in high winds.
- Application surface and drying temperature should be in the following range: +40°F to +86°F (+4°C to +30°C)
- Drying time: at least 12 hours per coat. Protect from rain or wet conditions for min. 24 hours. Do not view color before product is dry.
- Protect freshly coated areas from the rain; hang up scaffolding sheeting in front of the surface being worked on.
- Uniform product application is important to achieve a high-quality substrate appearance. This is most important on surfaces that receive glancing light or where surface appearance is critical.

### 2.4.2. Application

Apply with roller, brush or using an airless spraying method. Apply to continuous surface areas without any breaks or stops maintaining a wet edge. No overlapping or dry edges; apply in one continuous equal pass.

- **Application with roller or brush:**
  - Rollers and brushes with a uniform coating finish are suitable.
  - Avoid roller edges, ridges, overlapping and over coating areas 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 or other high quality tools to spread in any particular direction.
  - Coats:
    - Primer coat: Thin product with no more than 12 oz/gal or 10 % with clean water to improve flow and to compensate for absorbency.
    - Topcoat: After at least 12 hours, un-thinned is recommended however in some cases it may be applicable to thin up to 6 oz/gal or 5% with clean water.
- **Spraying method (airless):**
  - Nozzle: 0.79 mm / 0.031 inch
  - Always sieve product before use (Renosil Fine only), apply uniformly and as a thin coat.
  - It is not recommended to spray Renosil Coarse.
  - It is recommended to uniformly lay-off with a brush or roller on most surfaces.



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## 2.5. Auxiliary products

- Etching Fluid for removing sinter layers on solid new plaster. Do not etch thin coat renders or ETICS.
- BEECK HBP Silane 100, water-repellent primers for reducing moisture transport and salt efflorescence.
- BEECK Bonding Coat Coarse, slurry white primer (0.4 mm) with excellent adhesion properties.
- BEECK Bonding Coat Fine, smooth white primer with excellent adhesion properties.
- BEECK Quartz Filler, fiber reinforced, silicate-based, slurry priming coat for covering hairline cracks and minor structural defects. Apply over whole surface with the brush. BEECK Quartz Filler can also be mixed 1:1 with BEECK Renosil Fine as a coarse-grained primer and/or intermediate coat. Same color topcoat with BEECK Renosil Fine.
- BEECK Renosil Coarse, with texture grain (0.4 mm) for coarse-grained primer and intermediate coatings. Same color topcoat with BEECK Renosil Fine.
- BEECK Fixative or MBA Fixative, a primer, or pretreatment for highly absorbent or sanding substrates.
- BEECK Mineral Paints D/2 Biological Solution.
- BEECK Mineral Paint Brushes.

## 3. Application Rate and Container Sizes

The application rate (i.e. the quantity required for smooth, normally absorbent substrates) is approx. 300 – 325 sq ft / gallon (0.13 L / m<sup>2</sup>) per coat. Higher absorbent and higher textured substrates will increase consumption. Try out on a test area on site to determine substrate-related differences.

Container sizes: 1 Quart / 1 Gal / 3 Gal pails

## 4. Cleaning

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

## 5. Storage

Stored in cool and frost-free unopened containers, BEECK Renosil Fine can be kept for at least 12 months.

## 6. Hazard notes, safety instructions and disposal

Comply with the Safety Data Sheet. Safety Data Sheet available on request or at [BeeckMineralPaints.com](http://BeeckMineralPaints.com).

**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 vapors, spray-mist and dust. Carefully protect the area surrounding the surface to be coated, wash off splashes immediately with water. Dispose of product and containers in accordance with all official regulations.

Waste disposal number: 080112

## 7. Declaration

This technical information is offered as advice based on our knowledge and 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 the product is to be used. All information is subject to change without notice as part of our ongoing product development. Non-system additives for tinting, thinning, etc. are not permitted. Check the colors before use, allow to dry 12 hours before viewing color. This information sheet automatically becomes invalid when a new edition is issued. The information in the current version of the Safety Data Sheets is binding for classification according to the Hazards identifications, disposal considerations, etc.