



Etching Fluid

Acidic concentrate for removing sinter skin on new mineral render

Aqueous acidic concentrate for etching lime sinter layers on new lime and lime-cement renderings on façades. Also for cleaning weathered mineral renders and silicate coatings. Can also be used on interior surfaces if good ventilation is provided. Generally only suitable on solid, firm render or plaster coats with a minimum thickness of 5 mm, not for external thermal insulation composite systems (ETICS), synthetic resin renders/plasters and gypsum. For commercial use only.

1. Product Properties

BEECK Etching Fluid reliably removes sinter skin, a vitreous glossy high-tension and impermeable accumulation of binder on the surface of felled and floated lime and lime-cement renders. An unremoved sinter skin is a substrate defect according to VOB/C and poses the risk of stress-induced spalling, for example during driving rain. The gas-tight sinter layer also disrupts the carbonation and recrystallisation of "healthy" lime renders and plasters. They become worn and crumbly underneath the glass-hard layer. Creating a stress-free, porous and firm, surface zone is particularly important for pore deep, permanent silicification of active silicate paints such as BEECK Pure Crystalline and Beeckosil. At the same time, a uniformly absorbent homogeneous surface is created by the etching, which makes it possible to apply smooth, seamless and stain-free mineral coatings. The acid neutralises within a few minutes on the highly alkaline substrate. Rinsing with water is therefore not for neutralisation purposes, but instead to remove exposed textural and aggregate particles on the surface of the render. Especially in interior areas, these can also be removed from the plaster with a stiff broom before coating.

1.1. Composition

- Aqueous acidic solution of fluorosilic acids (pure mineral acids)
- Solvent free
- Organic content 0 %

1.2. Technical properties

1.2.1. Overview

- For use on interior surfaces and on façades
- Water thinnable: Concentrate, to be thinned with 3 – 5 parts water.
- Suitable for solid lime and lime-cement render or plaster
- Reliably removes lime sinter layers
- Creates a substrate to VOB/C requirements and suitable for painting
- Optimum silicification of subsequent silicate coatings
- Reduces absorbency and the staining
- Pure mineral acid and neutralisation products
 - The neutralisation products are water insoluble and are efflorescence-free
 - If used properly, the neutralisation is complete and the rinsing water is acid-free.
- Nonflammable
- Free from solvents, biocides and preservatives

1.2.2. Important building physics characteristics*

Parameter	Value	Conformity
Density _{20°C} :	1.20 kg/L	
pH value _{20°C} :	1 (unthinned)	
Viscosity:	comparable with water	
VOC content (max.):	0 g/L	ChemVOCFarbV (Regulations limiting VOC emissions of paints and lacquers)

* applicable to White

The VOC Decopaint Directive does not apply to cleaning agents.

1.2.3. Colour

- Colourless or tinted Pink.

2. Use

2.1. Substrate requirements

- The substrate must be water-wettable, clean, dry, firm and stable as well as free from efflorescent and separable substances.



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- Use high-pressure cleaner to remove coarse dirt deposits, crusts, loose old paint coats and friable renders and plasters before etching.
- Prepare and re-treat algae infested façades with BEECK Fungicide according to the factory specifications.

2.2. Substrates and preparatory treatment

■ **Solid lime plaster (PI/CSII), lime-cement plaster (PII) with water-wettable surface:**

Minimum thickness of the solid top render/plaster coat: 5 mm If in doubt, try out etching fluid on a test area first. Thin BEECK Etching Fluid with 3 parts water for use on façades and with 5 parts water for use on interior surfaces and on critical substrates. Allow fresh lime resin or plaster (PI/CSII) and lime-cement resin or plaster (PII) to cure and dry for 3 days at least before etching. Fresh renders and plasters continue to set by carbonization after the sinter skin has been removed. If the render or plaster is left for a lengthy period (several weeks or months) before painting, it may be necessary to recoat it with etching fluid if visible secondary sintering has occurred. Do not preset or apply silicate coatings until the whole render or plaster surface is sufficiently firm, dry and stable. Due to minimum strength requirements, wait at least 4 – 6 weeks before etching pure non-hydraulic and hydraulic lime renders or plasters (PI/CSII); examine and then try out on a test area first. Alternatively, the sinter skin can also be removed mechanically by using a gentle blasting method or manually using a brass wire brush.

■ **Existing mineral render or plaster (PI-PIII) with weathered, chalking mineral coating:**

Clean the façade with a high pressure cleaner to remove coarse deposits, crusts and lightly adhering pieces of render, plaster and coating. Then etch the façade with BEECK Etching Fluid, thinned with 5 parts water, and rinse with clean water. Also etch areas of new render, plaster and render and plaster repairs.

■ **Unsuitable substrates** are lightweight, scratched and insulating renders, synthetic resin renders, thin-coat renders, composite materials, especially external thermal insulation composite systems (ETICS), and gypsum and natural stone. If in doubt, try out the etching on a test area. Thin BEECK Etching Fluid with 5 parts water before using on critical substrates.

■ **Defective substrates** require a differentiated approach, examine and try out on a test area first.

2.3. Application instructions

2.3.1. General information

Check substrate suitability as required (see 2.1 and 2.2). Pay particular attention here to the absorbency, strength and texture of the respective substrate. Examine high quality and critical surfaces and try out on a test area first. Ensure that the product is used by qualified persons only.

- Hazardous substance requiring labelling, for commercial users only.
- Note and follow official instructions regarding façade cleaning, collection and discharge of wastewater. If necessary, obtain permits.
- 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. Watch out for drifting splashes caused by the wind. Enclose the façade if necessary.
- Provide personal protective equipment (wear protective clothing, protective gloves, safety glasses or goggles / face protection). Deploy instructed, competent personnel only.
- Do not use in enclosed spaces, basements, shafts or manholes. Ensure sufficient fresh air exchange when working indoors.
- 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
- Do not let the acid dry out, rinse after 10–15 minutes.
- Subsequent coats and presetting: after the whole substrate area has dried, at least 8 - 12 hours depending on the weather conditions.

2.3.2. Application

■ **With acid-proof ceiling brush:**

- For use on façades, thin BEECK Etching Fluid with 3 parts water (stir in 1 part BEECK Etching Fluid into 3 parts water); thin with 5 parts water for use on interior surfaces and on critical substrates.
- Apply by brushing onto the render or plaster uniformly. Avoid runs and sags in the dry render or plaster. Prewetted critical surfaces with a water hose.
- Etch façades from the bottom upwards. Do not let the acid drain into the ground or onto adjacent areas.
- A reaction can be recognized by effervescence on contact with the surface of the building material.
- Application time of the acid around 10 – 15 minutes.



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- After the reaction has finished, recognisable by the receding effervescence, rinse with plenty of clean water (high pressure cleaner or garden hose; if used on interior surfaces, use a stiff broom to sweep off loose plaster particles)
- Also etch and rinse areas of new render or plaster and local making good of render or plaster. Do not let the acid run onto intact surfaces.

3. Application Rate and Container Sizes

The application rate, i.e. the quantity required is around 0.02 L BEECK Etching Fluid per m², this corresponds to around 0.08 – 0.10 L thinned solution.

Try out on a test area to determine substrate-related application rate differences.

Container sizes: 5 L / 10 L

4. Cleaning

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

5. Storage

Stored cool and frost-free in the original container, BEECK Etching Fluid can be kept for at least 24 months. Close open containers airtight and use up the contents as soon as possible. Store in the original container in a well-ventilated, secured location with acid-proof fitout and a spillage tray. Never pour into non acid-proof containers.

6. Safety Instructions

■ Comply with the EC Safety Data Sheet. **C - Corrosive!** Causes burns. Harmful by inhalation, in contact with skin and if swallowed. Risk of serious damage to eyes. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show this label where possible). Carefully cover the area surrounding the surfaces to be coated, wash off splashes immediately with water. Do not breathe vapour, spray and dust. This product is for commercial use only. Keep out of the reach of children. Consult the relevant authorities to ensure proper, safe disposal of any wastewater produced. Do not release into the environment. Dispose of in accordance with the legal regulations.

■ Waste code (EWC code): 140603

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.