

# BEECK Calcidan

Easy to use, modified Soaked Marble Lime paint for interior and exterior use

## 1. Product Properties

Marble lime paint, slaked for many years, with good hiding power for interior lime-compatible substrates. Suitable for renovation and church painting on lime plaster and on firm lime wash coats. If required by the building conservation authority, can also be used on historical façades, taking into account accelerated weathering and chalking typical for lime. Reversible in the interests of listed building conservation, does not form any vapour barring thick covering layer, even after repeated renovation, and due to its unreduced open-pored property, does also not "smother" historical air-lime plaster.

BEECK Calcidan is formulated for easy use and produces wipe-resistant, efficient lime wash coats with hiding power and the best possible weather resistance. The chemical carbonation process produces a low-tension lime wash coat with bactericidal and mould resistant effect due to its natural alkalinity. Lends historical building materials worth preserving the typical aesthetic properties of lime wash.

### 1.1. Composition

- Wood-burned, redispersed slaked marble lime of the highest chemical purity with at least three years' soaking period and optimum fine crystalline grain distribution
- White pigmentation and low organic content (ca. 3 %) to improve application and to stimulate carbonation

### 1.2. Technical properties

#### 1.2.1. Overview

- Use on interior surfaces; can also be used on historical façades according to listed building conservation specifications
- Typical lime bronzing through chalking
- Easy to use, organically modified
- Highly opaque and efficient to use
- For lime-compatible substrates
- Wood-burned and slaked for many years
- Materiality and look and feel suitable for listed buildings
- Matt with bright, transparent lime lustre
- Capillary-active and moisture regulating
- Maximum carbon dioxide permeability
- Nonflammable
- The product's natural alkalinity helps to prevent bacteria and mould
- Can be coated over practically an unlimited number of times, as is non film-forming
- Low-tension and free from electrostatic charging

#### 1.2.2. Important building physics characteristics

Parameter	Value	Conformity
Density 20°C:	1.25 kg / L	
pH value 20°C:	11	
Dynamic viscosity 20°C:	approx. 100 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):	< 0.03 m	
Gloss level at 85°:	dull matt	EN ISO 2813
Flammability class:	A2 nonflammable	EN 13501-1, DIN 4102
VOC content (max.):	2 g / L	ChemVOCFarbV Cat. A / a

#### 1.2.3. Colour

- Lime White
- Can be tinted in pastel colours with BEECK Full Tone Lime Concentrate (max. 20 %) or with lime-compatible pigments.
- Due to the system and substrate, especially where tinted coats are applied, a mottled appearance is possible; therefore, always try out on a test area of original substrates on site.

## 2. Use

### 2.1. Substrate requirements

- Use only on porous, absorbent and water-wettable mineral lime-compatible substrates.
- In the case of historical buildings, consult the site engineers and the building conservation authority. Treat substrates carefully; carry out preliminary restoration investigations and documentation as required.



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- The substrate must be clean, dry, firm and stable and must be free from efflorescent and separating substances.
- Test new render or plaster for drying and strength.
- Carefully make good chipped surfaces, cracks and misses with the same type of material and the same texture.
- Before coating, prewetten absorbent substrates and allow to dry on until matt-damp.
- Ensure uniform substrates and careful application on critical and high visual quality surfaces and in glancing light.

## 2.2. Brief information on the standard system

- Apply first coat with fresco method on fresh lime plaster, apply further coats after the plaster has dried.
- At least three coats as typical for lime; to be determined by trying on a test area.
- Optimally adjust BEECK Calcidan to the substrate and use by adding 30 % water maximum.
- High humidity stimulates carbonation and, just like a lime-compatible substrate, it is also indispensable for a durable, wipe-resistant result.

## 2.3. Substrate and preparatory treatment

- **(Air)lime plaster or render (PI,CSI-II), lime-cement plaster or render (PII), renovation plaster or render, readily water-wettable:**  
If necessary, grind off or etch sinter skin. Fresco primer coat on new plaster or render; apply subsequent coats after surface of plaster or render has dried. Prewetten old plaster or render and leave to dry on until matt damp, not very suitable for lime wash paints!
- **Firm lime coats:**  
Clean and brush down. Stabilise chalking coatings with BEECK Fixative, thinned with 2 parts water. Rinse off distempers and tempera paints. Note and follow listed building conservation specifications!
- **Natural stone, brick:**  
Test for absorbency, moisture damage and efflorescence (salt edges!). Clean, make good crumbling joints. Try on a test area, not very suitable for lime wash paints!
- **Clay or loam:**  
Clay or loam must be through-dry, firm and stable. Repair cracks beforehand using plaster or render, brush off any sanding grain. Prewetten and allow to dry until matt damp. Apply several extremely thin layered, thinned coats of BEECK Calcidan, with at least 24 hours drying time between each. Always try out on a test area on site first! To increase durability, cover exterior clay or loam, e.g. on half-timbered gables, with a thin layer of lime render.
- **Unsuitable substrates** are gypsum-based substrates, for example, gypsum plaster, stucco and gypsum board. Equally, film-forming coats, for example, oil, latex and synthetic resin coatings and organic substrates such as plastics and wood-based materials.
- **Defective substrates** require a differentiated approach. Caution when working on efflorescent and saponifiable substrates. Apply a renovation plaster or render on damp, salt contaminated surfaces, basement walls and base areas, as well as areas with hygroscopic or rising damp.

## 2.4. Application instructions

### 2.4.1. General information

BEECK Calcidan is designed for lime coats for use in listed building conservation, church painting and renovation of old buildings and thanks to its excellent properties, it can also be used in stables and vaulted basements. Experience in lime paint techniques and lime-compatible substrates is indispensable for a durable coating result. Trying out on a test area of original substrates is also indispensable. Please always note the following: Colour fluctuations, chalking and sintering can occur, depending on the substrate, room climate and use. These effects are typical for lime and explicitly do not constitute a product defect.

If used on façades, lime coats are removed by weathering relatively quickly due to the direct action of driving rain and air pollutants (sulphur oxide) and are not to be compared with silicate coatings with regard to durability. Here they act as decorative, temporary and reversible coats of a historically established lime paint tradition. We are unable to provide any warranty for durability, chalking and weathering resistance for lime-bound exterior coats.

Check substrate suitability as required (see 2.1 and 2.3). Pay particular attention here to the absorbency, strength and texture of the respective substrate. Ensure that the product is used by qualified persons only. Trying out on a test area of the original substrates on site is indispensable for lime wash paints.

- 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.
- Protect the skin and eyes. Wear safety glasses or goggles / face protection. Refer to safety instructions!
- Before and during use, stir BEECK Calcidan thoroughly with powered mixing paddle and sieve occasionally.
- Do not use in wet conditions, if there is a risk of frost, on hot surfaces or in the blazing sun.



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- Prewetten absorbent substrates and allow to dry on until matt-damp.
- Minimum application temperature: +8°C
- High humidity stimulates carbonation.
- Drying time: at least 24 – 36 hours per pass, only paint over wipe-resistant coatings.
- Protect fresh coats from rain and the blazing sun; hang up scaffolding sheeting in front of the surface worked on.

## 2.4.2. Application

With soft, prewettet BEECK Mineral Paint Brushes. Apply according to recognised rules of good lime techniques with extremely thin coat, uniformly and seamlessly by cross coating.

- Depending on the substrate, thin BEECK Calcidan before use with 10 % - 30 % water. Prewetten substrate, the coat must never be "siphoned off".
- Coats:
  1. *Primer coat:* Where possible, as fresco on fresh lime plaster. Slurry additive of 2 kg BEECK Quartz Filler P to 12.5 L BEECK Calcidan is possible; thin with approx. 20 % water.
  2. *Intermediate and topcoats:* Apply after 24 – 36 hours at the earliest. Only paint over if has carbonated and is wipe-resistant. Apply topcoats without slurry additive. In general, 2 – 3 coats are required, depending on the substrate and work method; determine by trying on a test area. 3 coats are to be provided for in exterior areas.

## 3. Application Rate and Container Sizes

The application rate, i.e. the quantity required is approx. 0.12 L BEECK Calcidan per m<sup>2</sup> and pass. Try on a test area on site to determine substrate-related application rate differences and the number of coats required.

*Container sizes:* 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 Calcidan can be kept for at least 12 months. Cover the contents of partially used containers with water and sieve before further use.

## 6. Hazard notes, safety instructions and disposal

Comply with the EC Safety Data Sheet. Safety data sheet available on request.

**Hazardous components which must be listed on the label:** Calcium hydroxide

**Signal word:** Danger

**Pictograms:** GHS05

**Hazard statements:** Causes skin irritation. Causes serious eye damage.

**Precautionary statements:** Keep out of reach of children. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Disposal in accordance with the official regulations. Should not be released into the environment.

Waste disposal number: 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. 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.