



Silicate Paint

Productinformation

10.08.2018

Kreidezeit Silicate Paint is a two-component coating system, which consists of the following two Kreidezeit products:

- Silicate White (article no. 879 - 880)
- Potassium Waterglass (article no. 607.1 - 607.4)

Both components are mixed together shortly before application in accordance with these instructions to produce a **Pure Silicate Paint** that is free of synthetic resin.

Silicate Paints (waterglass paints) are one of the most resilient exterior coatings in the painting trade. It is not uncommon for exterior walls painted with Silicate Paints to still look good 20 years later. Waterglass is essentially glass dissolved in water. Only Potassium Waterglass is suitable for the production of paint. This is made out of quartz sand and potash. Silicate Paint is cured by absorbing carbon dioxide from the air. In this process, the waterglass is "silicified" and binds pigments to the substrate.

Pure Silicate Paint should not be confused with typical silicate paints with dispersion additives, which contain up to 5% pure acrylic binder, limiting their diffusion capabilities. Pure Silicate Paints are among the most breathable paints on the market.

■ Uses

For exterior and interior walls.

Suitable exclusively for use on untreated and non-water repellent lime and lime cement renders that do not contain any synthetic resin, as well as for renovating old silicate coats free of synthetic resin.

New lime renders may only be painted after a setting time of at least 4-6 weeks (setting time for the lime; waterglass applied to fresh lime can cause efflorescence - commonly known as salting - and poor binding!).

■ Properties

- Breathable, absorbent and extremely durable
- Prevents fungi and bacteria from growing due to high alkalinity
- Resistant to washing, weathering and chemicals
- Non-flammable
- Emission-free
- Free of synthetic resins, solvents and preservatives
- Vegan

■ Substrate requirements

The substrate must be **absorbent**, structurally sound, clean, dry, solid, non-greasy and free from colouring and permeating ingredients and synthetic resins.

■ Preparing the substrate

All surfaces must be thoroughly brushed and dusted down. Lime and lime cement renders must be etched to remove layers of sinter. Remove any loose render or wall parts and touch up with a similar material.

■ Important information for application

Technical expertise and experience is required to apply Silicate Paint. All information on application and mixing ratios is purely a recommendation and is not binding. Variations may occur depending on the substrate conditions and previous experience and should be determined by someone with experience of working with silicates. **It is strongly recommended that you check the suitability of Silicate Paint by testing a small area on the substrate before applying coats across large areas.**

■ Application

On untreated renders, Kreidezeit Silicate Paint must be applied in at least 3 coats: Primer, then diluted first coat, then undiluted final coat. Very rough or high-contrast substrates may require a further final coat. Finally, a transparent fixative may be necessary.

Apply the primer, the paint and the fixative evenly, wet on wet and without any interruption, using a facade brush. Do not use a roller or spray.

Leave overnight to dry before applying the next coat.

A suitable bucket and a powerful drill with agitator are required to mix the paint.

The mixed colour can be stored for approx. 1 week, provided it is covered with a layer of film pressed onto the paint surface to protect it from drying and hardening. Carefully remove any hardened paint before application, do not stir it into the paint.

■ Primer

To prime an absorbent surface (untreated render), dilute 1 part Potassium Waterglass with 2 parts water.

Approx. 0.3 litres of primer should be applied per square metre.

■ First coat of paint (diluted)

Stir 12 kg of Silicate White into 17 litres of Potassium Waterglass, using a powerful drill with agitator. Ensure that the mixture is completely smooth and free of any lumps. Leave to expand for at least 30 mins, before stirring again.

Prior to painting, the paint may need to be diluted further to ensure absorbency. Firmly press a facade brush soaked with paint vertically onto the substrate at chest height. The paint that seeps from the brush should run at least 80-100 cm down the surface. Dilute the paint with Silicate Paint until this value is reached.

■ Second coat of paint (undiluted)

Stir 12 kg of Silicate White into 10 litres of Potassium Waterglass, using a powerful drill with agitator. Ensure that the mixture is completely smooth and free of any lumps. Leave to expand for at least 30 mins, before stirring again prior to application.



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■ Fixative (optional)

If the final coat chalks after a sufficient drying time of at least 48 hours, a transparent fixative with diluted Potassium Waterglass may be applied.

Dilute 1 part of Potassium Waterglass with 2 parts water.

■ Tinting

Tinting can be carried out using nearly any Kreidezeit earth, mineral or spinel pigments. Maximum ratio: 100 g of pigment per 1 kg of Silicate White.

First create a smooth paste with the pigments using a little water and then mix in the ready-mixed Silicate Paint. The pigments can be mixed freely with each other.

Colour charts are available from Kreidezeit and Kreidezeit dealers.

Attention – following Kreidezeit Pigments are unsuitable for use in Silicate Paint: Siena red (Art. 824), Umber reddish (Art. 808), Umber red-brown (Art. 825).

Adding pigments can reduce storage time. Ultramarine Blue and Ultramarine Violet are not suitable for outdoor use.

Tinted Silicate Paints may cause a characteristic cloudy effect.

■ Application sequence

Primer:

per m² approximately:

0.1 litre of Potassium Waterglass

+ 0.2 litre of water

First coat:

On primed surfaces per m² and per coat, at least:

0.075 kg of Silicate White

+ 0.100 litre of Potassium Waterglass

Second coat:

On primed and pre-coated before substrates, per m² and per coat, at least:

0.17 kg of Silicate White

+ 0.14 litre of Potassium Waterglass

The coverage and amount of paint needed can vary greatly depending on the absorbency and nature of the substrate. The exact amount needed can only be calculated by testing the paint on the actual substrate.

■ Application and drying conditions

Avoid direct sunlight, draughts, dirt and surface temperatures below 5°C and over 25°C. Do not apply to heated facade surfaces. Avoid allowing the substrate to dry too quickly.

Processing and drying temperatures:

At least 5°C for at least 48 hours.

Silicate Paints may not be applied below 5°C (take into account the risk of overnight frost).

Protect coats applied outdoors from sun and rain in the first few days.

■ Cleaning the tools

Clean immediately with water after use. Store tools in water during work breaks.

■ Drying times

The paint becomes dust-dry after 2-3 hours. Additional coats can be applied after at least 12 hours.

■ Disposing leftover product

Do not dispose of the remains of the individual components in wastewater, but keep hermetically sealed for later use. Dried product remains can be disposed of with household waste. Empty containers can be recycled.

■ EU VOC Value acc. to 2004/42/EC

VOC limit / Max. VOC content (cat. A/a): 30 g/l (2010), Product contains max. 1 g/l VOC.

■ Hazard Classification

Not applicable, no hazardous materials.

■ Warning

The product is alkaline. Wear safety glasses and protective gloves during application. Protect all other surfaces against paint splashes (especially glass, brick, tiles, metal parts and oiled/varnished wood)! Paint splashes must be removed immediately using plenty of water (risk of irreversible stains, including on glass lenses).

In case of skin contact: Rinse with plenty of water.

If skin irritation persists, seek medical attention.

In case of eye contact: Hold the eyelids open and rinse eyes under running water for several minutes and seek medical attention. Keep out of reach of children!

The information above was determined based on our most recent experiences. Due to application methods and environmental influences, as well as the varying nature of the substrates, liability for the general validity of the individual recommendations is excluded. Users must test the product prior to application to ensure it is fit for the designated purpose (sample coating).

This document is no longer valid if a new version is published or the product is modified. For the latest product information, please contact Kreidezeit directly or visit our website at www.kreidezeit.de



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Potassium Waterglass

Product information Article no. 607

Concentrated binder for Kreidezeit Silicate Paint, diluted with water, without preservatives and organic solvents.

■ Composition (Full Declaration)

Potassium silicate, water

■ Container sizes

Article no. 607.1	0.75 l
Article no. 607.2	2.5 l
Article no. 607.3	5 l
Article no. 607.4	10 l

For prices, please refer to the valid price list.

■ Storage

The product will keep for at least 3 years if stored airtight and protected from frost.

■ EU VOC Value acc. to 2004/42/EC

VOC limit / Max. VOC content (cat. A/h): 30 g/l (2010),
Product contains max. 1 g/l VOC.

■ Hazard Classification

Not applicable, no hazardous materials.

■ Warning

The product is alkaline. Wear safety glasses and protective gloves during application. Protect all other surfaces against paint splashes (especially glass, brick, tiles, metal parts and oiled/varnished wood)! Paint splashes must be removed immediately using plenty of water (risk of irreversible stains, including on glass lenses).

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Silicate White

Product information Article no. 879 - 880

Pure mineral pigment powder for Kreidezeit Silicate Paint. All raw materials are alkaline-resistant and extremely weather-resistant in this composition.

■ Composition (Full Declaration)

Marble powder, titanium white, talc, china clay, quartz powder

■ Container sizes

Article no. 879	1.2 kg
Article no. 880	12 kg

For prices, please refer to the valid price list.

■ Storage

Unlimited shelf life if stored in a dry place.

■ EU VOC Value acc. to 2004/42/EC

VOC limit / Max. VOC content (cat. A/a): 30 g/l (2010), Product contains max. 1 g/l VOC.

■ Hazard Classification

Not applicable, no hazardous materials.

■ Warning

Do not breathe the dust. Wear respiratory protection if necessary. Keep out of reach of children!

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