



# TECHNICAL DATASHEET

## **SILICATE-BASED COATING**

**Traditional mineral paint with potassium silicate**

### **DESCRIPTION**

Natural inorganic paint, transparent and antibacterial, with a compound with potassium silicate modified with an acrylic copolymer in aqueous dispersion. Highly resilient to light and atmospheric conditions. High permeability to water steam. It petrifies by reaction with substrates with a mineral nature.

### **RECOMMENDED USES**

This product is specially conceived for restorations with a historical and artistic nature and building sites where the main goal is to achieve effects obtained from mineral paints in the past. It can be used indoors and outdoors. For indoors, any upright surface in a building, insulation boards, but always of a mineral nature. For outdoors, it is adequate for tunnels, basements where surface treatments resilient to fire are required and with a low odour emission, like hospitals, schools, crèche, etc.

### **CHARACTERISTICS**

The application for silicate paints is used as a protection when restoring façade, especially on plaster.

The degradation on the exterior plaster is mainly due to the destructive effect that soluble salts present.

Combustion gas and industrial emissions combine with rain water and form acids. These acids react with mineral binders of the construction materials forming soluble salts. When they crystallise and get hydrated, they increase their size and exert pressure destroying the construction materials.

With a constant exposure to the exterior, plaster loses its mineral bonding agents. However, silicate paints are resilient to acids and its crystalline hardness is similar to a crystal rock.

Another advantage is its expansion performance by heat, similar to mineral materials, which avoids having crevices and flaws.

It is a decorative and protective paint for surfaces. Due to its inorganic compounds, it penetrates deeply in the material, petrifying with a reaction between CO<sub>2</sub> of the air, paint compounds and the material, giving a mineral appearance.

Its main characteristics are:

- High permeability to water steam, which avoids any release or flaw.
- It waterproofs the surface.
- High resistance to corrosive and atmospheric environments, acids, alkalis, UV and light.
- It does not open crevices. Highly washable.
- It presents biocidal effect facing the development of algae, mold and fungus.
- It does not turn yellow. It does not discolour.
- Odourless. Environmentally friendly due to its lack of organic solvents.
- It does not create any coat. Since it does not create any sticky layer, it does not make the surface dirty. Perfect adhesion to the material.
- It unifies the mineral materials. Resilient to fire due to its non-flammable character.
- For indoors and outdoors.
- It follows the rule DIN 18363.
- Its duration is superior to any other conventional paint.



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### **TECHNICAL CHARACTERISTICS**

Main component:	Potassium silicate modified with an acrylic copolymer.
Paint thinner:	Water or silicate paint thinner.
Appearance:	Mineral. Matt.
Weight solids:	62 ± 2 %
Specific weight:	1,40 ± 0,05 g/cc.
Wet scrub resistance:	Type II (UNE 48243).
Colour:	White and pastel tones. For other colours, proceed to consult.
Drying:	2-4 hours, depending on humidity and temperature.
Repainting:	Minimum 8 hours.
Theoretical performance:	8-10 m <sup>2</sup> /l and coat. Depending on the irregularity and absorption of the surface.
Reaction to fire:	B-s1; d0
Packaging:	4 and 14 litres.

### **APPLICATION**

Silicate paints can be applied to most of substrates of mineral nature and some others:

**- The most appropriate ones:**

- New or old mortars made of sand and white lime.
- New or old plaster made of cement.
- Concrete surfaces clean from release agents' residues.
- Brick and natural or artificial stone walls.
- Fibre cement boards.
- Metallic surfaces of galvanized iron and aluminium.

**- The least appropriate ones:**

- Chuff brick walls.
- Gas concrete (porous and absorbent).
- Inorganic insulation boards.
- Walls painted with lime.
- Plaster finishes.
- Wooden boards.
- Oil-based paints.
- Surfaces with oil stains.
- Plastic materials.
- New plastic paints.



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### **Surface preparation:**

On new surfaces of construction materials, it is advisable to check if their state is adequate. If this were not the case, proceed to repair or prepare. Clean the surface to remove any dust remains, grease and general dirt.

On new surfaces with a mineral nature like stucco, natural and artificial stone, lime-cement mortar, brick, fibre cement, etc., the already said surface must be free of contaminants and saline efflorescences. In case of efflorescence or salty residue, treat it with a neutralizer liquid and clear with plenty of water and let it dry. For the application of this product, it is not necessary to apply any special product on the surface, since it is a binder once it is diluted with our SILICATE BINDER. Apply 2 coats of SILICATE PAINT according to the Instructions for use.

On already painted surfaces, if silicate or mineral paints were used, scrape the material to remove bad adhesions. If they are painted with other products, like plastic paints, oil-based paints, etc., they must be removed completely, leaving the material clean through sanding, chemical stripping or high-pressure water. Proceed like if it were a new surface.

On porous surfaces, they must be unified with our SILICATE BINDER.

On plaster surfaces, apply a previous treatment with our ACRYLIC BINDER to unify dead plasters or powder residues. It is resistant to alkalinity and once it is dry, it makes the material resistant to the aggressiveness of silicate paints.

In case of pollution due to mold, fungus, algae or other elements, apply a water and bleach solution or hydrochloric acid to 10 % on the surface and let it work between 15-20 min. Next, clear with plenty of water and let it dry completely before applying the paint.

Fissures in the material must be repaired.

Colour variations must be taken into account due to reactions between the paint and the material. For that reason, it is advisable to test before applying the product.

For other surfaces not contemplated in this technical datasheet, contact our Technical Department.

### **Instructions for use:**

Stir the content until it is uniform. Always apply on clean, dry surfaces without any dust, wax, grease, etc. It can be applied with brush and roller.

Once it is uniform, apply two coats. The first coat must be diluted between 20-50 % with water to improve penetration in the material, although it is advisable to dilute it with a silicate paint thinner, like our SILICATE BINDER. When the paint is thicker or the material very absorbent, dilute it in a proportion of 1 part of water to 1 part of SILICATE BINDER and add paint between 20-50 %. The second coat must be diluted with water between 5-20 % and apply between 240-350 g/m<sup>2</sup>.

In case of coloured paint, apply a first coat of mineral paint diluted in a proportion 1:1:1 of water, silicate binder and coloured-silicate paint. Protect the aluminium and wood frames, application tools, etc., Wash with plenty of water immediately after finishing .

Never apply under 5°C or above 35°C.

### **OBSERVATIONS**

The characteristics of the product can be achieved once it is completely dry and hardened, as well as applied on the specified basis.

Consumption is theoretical and it depends on the state of the material. The real consumption will be determined for each construction work and its representative tests.

The data explained here is based on our current knowledge, laboratory trials and use in a particular circumstance with subjective opinions.

Due to the impossibility of establishing an appropriate description to each nature and state of each surface, it is impossible to guarantee the total reproduction for each specific use.



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The manufacturer and the seller do not assume, except for specific written agreements, any responsibility coming from the use of our products, results, damage, etc., that can be presented in applications carried out according to our recommendations, since they are out of control of the company.

## **STABILITY AND PRESERVATION IN THE CONTAINER**

Preserve in a well-closed container, under cover and in a temperature between 5-30 °C.

The shelf life of the product in its original container and without opening is one year.

## **SAFETY AND ENVIRONMENT**

Alkaline product. It is advisable to use protective gloves and glasses to protect from splashes. Do not eat. Keep open containers away from children. Keep a good ventilation in case of an indoors application. For more information, see the safety datasheet of the product.

Data indicated in this technical datasheet can be modified without prior notice.

**REVIEW: 10/03/2016**