



arteMURI® SIL4 BIO SILIKATFARBE



Smooth potassium silicate mineral finish for interior and exterior use.



Product description and fields of application

SIL4 BIO is a mineral water paint, formulated according to DIN 18363 point 2.4.6, based on stabilized and modified potassium silicate with compatible binder, natural inorganic pigments resistant to light and UV rays and selected charges. After being applied to the substrate, potassium silicate reacts with the carbon dioxide in the air and with the calcium salts present in the plaster layer, giving rise to calcium silicate, a mineral salt with high consolidation and adhesion properties. SIL4 BIO is highly breathable to water vapor and has excellent adhesion to the substrate, avoiding detachment or flaking over time. It also has low dirt retention and a sanitizing action that minimizes the rooting and proliferation over time of bacteria, mold and algae. The product is resistant to atmospheric agents, has a good resistance to rubbing and washing and, since it is hydrophobized with special siloxanic additives, gives the painted support a low water absorption.

SIL4 BIO is suitable for external application on mortar plasters based on lime-hydraulic binders, traditional and premixed plasters finished as civil and in particular for the protection and decoration of new buildings in urban construction and in restoration works in historical centers. SIL4 BIO can be tinted with the arteMURI tinting system.

Advantages

- mineral matte appearance
- good resistance to atmospheric agents
- excellent breathability
- good water repellency

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Specifications

The wall surfaces, such as mineral plaster based on lime-hydraulic binder, premixed and traditional civil finished, can be finished with the breathable and protective mineral paint SIL4 BIO of Fornaci Calce Grigolin, a product based on potassium silicate in watery solution. The minimum consumption of this product is 0.26 l/m² for two coats.

Consumption and packaging

SIL4 BIO is supplied in 15 l packages.

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Conservation Standards

Protect against frost. Store at temperatures between +5°C and +30°C in the original sealed containers. Under these conditions the shelf life of the stored product is at least one year.

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Substrate preparation

New substrates and/or any repairs (patches) must be cured by at least 4 weeks, clean and dry. Old substrates must be consistent, free of salt efflorescence and loose parts, thoroughly cleaned according to the nature and intensity of the dirt deposited on the surfaces to be treated. To level and fill imperfections such as holes, cracks or crevices, first intervene with a suitable product or repair mortar. Clean up any mold or algae and then sanitize the surface with SEI OK restorer.

On surfaces already painted with mineral paints, make sure of the condition of the film: brush and/or scrape the detaching film, completely remove high layers of non-adherent paints.

On surfaces already painted with well adhering synthetic paints, it is possible to intervene with the universal primer PRIMER UNI-KO GM, bearing in mind, however, that the permeability to steam will be determined by the underlying layer of synthetic paint.

Due to the chemical reaction described above, silicate products CANNOT be applied on gypsum, plasterboard, wood and metal substrates.

Substrate treatment

New plasters: always apply one coat of F4.

Plasters with mineral paints (lime or silicates): always apply one coat of F4 SIL.

Plasters with adherent synthetic paints (acrylic, siloxanic): apply one coat of PRIMER UNI-KO GM.

Cement/concrete/fibrocement: the application of Silicate finishes is not recommended.

New gypsum/plasterboard: Silicate finishes are not recommended.

Gypsum/plasterboard painted with tempera: the application of Silicate finishes is not recommended.

Gypsum/plasterboard painted with washables: the application of Silicate finishes is not recommended.

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Product preparation

Dilute the product with about 25% by volume of water for the first coat, with 20% for the second coat. For roller application dilute with 7-10% of water maximum. In both cases mix everything well.

It is always advisable, especially on very absorbent surfaces and in case of medium-dark colors, to dilute the product with F4 SIL, in order to improve adhesion properties and bonding power.

Application

The product should be applied by roller or brush; apply a first coat taking care to distribute the product evenly on the surface. After at least 10-12 hours proceed with the application of the second layer.

Withdraw the material necessary for the execution of the job all from the same batch. If different batches of product are used, it is advisable to mix them together in order to avoid slight differences in shade. Absolutely avoid the application of different batches on the same surface and finish the wall with a single batch, then resume painting on the wall at the edge with the next batch. Wash tools and equipment with water immediately after use.

Important Warnings

Do not apply with ambient and/or substrate temperature lower than +5°C or higher than +35°C and with relative humidity higher than 75%. Otherwise the silicification reaction is inhibited, with possible detachment of the material and/or formation of stains (in case of colored products).

Avoid application in presence of superficial condensation, under direct sunlight or strong wind. The adhesion of the product to the substrate is not guaranteed when the application takes place on surfaces that have salt efflorescence or are subject to humidity, therefore it is necessary to restore the masonry beforehand.

Special Warnings

DUE TO THE MINERAL NATURE OF THE PRODUCT, THE APPLICATION OF DARK COLORS, EVEN IF FEASIBLE, IS DEFINITELY NOT RECOMMENDED BECAUSE OF THE PROBLEMS THAT MAY OCCUR (IN PARTICULAR STAINING AND NON-HOMOGENEITY).

Respect the climatic conditions of application indicated above and protect the surfaces from rain and humidity for at least 48 hours: in this way it allows a complete drying of the product and the regular silicification. If, during this period, rain or high humidity events occur (mists and/or superficial condensation, especially in autumn), translucent drippings (so called "snails") could form. This phenomenon does not affect the quality of the product and can be eliminated by washing with water or waiting for the next rainfall.

MASK AND PROTECT THE AREAS THAT ARE NOT TO BE PAINTED, AS SILICATE CAN ATTACK GLASS, METALS, CERAMICS, ENAMELS, PAINTS, MARBLE AND GRANITE.

Safety instructions

The product does not require hazard labeling under current regulations. Use the products according to current hygiene and safety regulations. After use, do not dispose of containers in the environment. Let the residues dry well and treat them as special waste. For further information please refer to the safety data sheet.

The reported data refers to Quality Control tests in standard environmental conditions. Practical applications in the construction sites may detect significantly changed data, depending on operating conditions, so the information on the Card is only indicative because the user must always check its suitability for intended use of the product by taking responsibility for the use. Fornaci Calce Grigolin S.p.A. reserves the right to make technical changes of any kind without prior notice.

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TECHNICAL DATA	PERFORMANCE
Binder type	Potassium silicate modified with compatible binders
Appearance	smooth paste/pigmented
Specific weight(UNI EN ISO 2811-1) 25°C±2	1480 ± 20 g/l
Brookfield viscosity(ASTM D2196) 25°C±2	10.000 ± 2.000 cP
Water vapor permeability and classification (UNI EN ISO 7783-2)	V = 380 g/m ² 24h Class I (high permeability)
Equivalent air layer thickness (UNI EN ISO 7783-2)	Sd = 0,012 m
Liquid water permeability and classification (UNI EN 1062-3)	w24 = 0,085 kg/m ² h ^{0,5} Class III (low permeability)
Suitable for facade protection as it complies with the KÜNZLE theory (DIN 18550) where w24 < 0,5 kg/m ² h ^{0,5} and Sd<2 m	Sd · w24 = 0,013 kg/m h ^{0,5}
Degree of gloss (UNI EN ISO 2813)	5 -10 gloss, matt
VOC content (DIR. 2004/42/CE)	Paint for exterior walls of mineral substrate. EU limit values for subcategory c, type BA 40 g/l (2010) This product contains a maximum of 40 g/l of VOCs.
Application	brush, roller
Theoretical consumption	approx. 190 g/m ² per coat (0.13 l/m ²)
Theoretical yield	3.8 m ² /l with two coats
Overpainting	4-6 hours

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