Technical data sheet

Diessner Silicon plus

Silicon resin façade paint

High-grade, matte silicon resin facade paint with SIO-TEC formula

SIO TEC formula: Formation of three-dimensionals silicon oxide meshes for coatings with low soiling tendency and high colour stability.

- Water-dilutable
- Highly diffusible, CO_2-permeable
- Highly weather-resistant, good water-resilience
- Very good rain protection
- Not film-forming, low tension
- Not thermoplastic
- Very good coverage, high degree of whiteness
- Very easy to handle
- Alkali-resistant, therefore saponification-resistant
- Fungicide / algaecide film protection
- Egalisation coating for coloured mineral top coats

Application
High-grade silicon resin facade paint with very good coverage for weather-resistant façade coatings with very good rain and weather protection. Diessner Silicon plus is highly water steam- and carbon dioxide-permeable, but is still very water-repellent, has low tension, is easy to handle and has a high yield. Due to the SIO-binding agent and filling combination used, Diessner Silicon plus is mineral matte, has low tension, is not film-forming, is not thermoplastic and has a low soiling tendency. Also ideal for new and renovation coats on composite heat insulation systems.
Suitable substrates are mineral plasters in accordance with DIN EN 998-1 (minimum pressure resistance 1 N/mm² = mortar group PIc - PIII in accordance with DIN V 18550), façade paints that can be coated and textured plaster.
With preventive film protection against algae and fungal growth.

Technical data

Binding agent base	Silicon resin and plastic dispersion in accordance with DIN 55947
Pigment base	Titanium dioxide
Gloss level	Matt

Classification in accordance with DIN EN 1062
Water vapour permeability: Class V_1 high: corresponds to sd-value < 0.14 m; actual value: 0.05 m
Water absorption (W-value): Class W_3 low: corresponds to < 0.1 kg/m² x $h^{0.5}$

Thickness	approx. 1.55 g/cm³

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Colour	White
Tinting	Can be tinted using Diessner MIX and at the place of manufacture or with suitable silicon full-tone paints up to max. 3%. The supplied colours are to be checked for colour accuracy before painting. Please refer to BFS datasheet no. 25. The offered properties can change due to tinting. For intensive colours with poor coverage due to their pigment characteristics, apply an undercoat of DiessnerMIX Colour Base outside tinted in the desired colour.
Colour fastness as per BFS datasheet no. 26	Class A / group 1 and 2 (depending on the colour)
Container size	1.0, / 5.0 / 12.5 and 15 litre container
Storage	Store cool but frost-free. Seal opened containers well and use within a short period. Unopened containers can be kept for a minimum of 24 months.
Coverage	Depending on the absorbency of the substrate, approx. 150-200 ml/m² per coat on a smooth substrate, substantially more on textured surfaces. Test any object-specific deviations with a trial coat patch.
Product code Colours and paint	M-SF 01
VOC content	Class c type wb, VOV limit from 2010 = 40 g/l, max. VOC value < 10 g/l
Hazard identification	**R 52/53** Harmful for water organisms. Can have a long-term harmful effect in waterways.
Declaration of ingredients	Polymer dispersion, silicon resin, titanium dioxide, calcium carbonate, silicon fillers, water, film forming aids, additives, preservatives: 5-chlorine-2-methyl-4-isothiazolin-3-on, 2-methyl-2H-isothiazol-3-on, tetramethylolacetylendiurea, 1,2-benzisothiazol-3(2H)-on, film protection: Terbutryn, 2-octyl-2H-isothiazol-3-on, zinc pyrithion, zinc oxide. Advice for people allergic to isothiazolinone is available on telephone number +49 (0)30 60 00 02 49.
Special notes	**S 2** Should be kept out of reach of children. **S 23** Do not breathe in vapours/aerosols. **S 24** Avoid contact with the skin. **S 26** In case of contact with the eyes, rinse thoroughly with water immediately and consult a doctor. **S 46** In case of swallowing, summon a doctor immediately and show him/her the package or label. When using in a spraying process, do not breathe in the spray mist and use breathing apparatus during spraying work. Always read and note the label and product information prior to use. Not for interior use. Do not allow the paint to enter drainage systems, waterways or soil. Carefully cover all surfaces that are

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not to be coated. Rinse any paint sprayed onto surfaces with water whilst still wet. For more information, see EC safety datasheet.

Disposal

Only completely empty containers should be passed on for recycling. Remaining liquid materials should be brought to an authorised collection point for old paint/varnishes. Dried material residues can be disposed of as hard paint or domestic waste. Waste key no. 080112 according to the AVV waste directory regulation.

Handling guidelines

Coating structure

For substrate preparation, refer to: Suitable substrates and their preparation.
Stir the material thoroughly before use. Depending on the substrate, thin down the primer with 5-10% water and the top coat with max. 5% water. Apply and spread the coats evenly wet on wet.

Method of application

Can be applied with brush and roller. Can be applied with airless equipment. If using airless equipment, mix the paint thoroughly before use and thin down and strain if necessary. After the spray coating, work in the material evenly onto the substrate with a paint roller.

Airless application

Nozzle: 0.021“-0.026“
Spray pressure: 150 - 180 bar
Spray angle: 50°

Lower limit for application temperature

+ 5°C substrate and ambient temperature. The substrate temperature must be at least +3°C above the dew temperature.

Drying time

Surface dry after approx. 6 hours and paintable after 8 hours at a temperature of + 23° C and 50% relative humidity. Considerably longer drying time at lower temperatures and/ or higher humidity. During the drying time, the coat must be protected from moisture.

Cleaning the tools/ airless equipment

Clean tools/ equipment with water immediately after use.

Please note

Paint should be thinned down with clear water only in the specified quantity; pay attention to the Coating structure section. When applying the coat, please note the VOB (contracting rules for award of public works contracts), part C, DIN 18363, para. 3. For horizontal and slightly inclined surfaces, we recommend planning more frequent renovation intervals (refer to BFS datasheet no. 9 para. 3). Standing water must be excluded on these surfaces. Do not use the material in direct sunlight, strong wind, if there is a risk of rain, mist and/or dew, if the humidity is above 85% and if the ambient, material and subsurface temperature is below +5°C. Protect from exposure to moisture during the application and drying period. Do not apply if the temperature is above +30°C.

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Not suitable for surfaces with plasto-elastic and varnish-like old coats. Not suitable for surfaces with salt contamination as well as plastic and wooden surfaces. Do not mix with other coating materials. Before starting the work, carefully cover all surrounding surfaces.
Apply the material evenly. To avoid uneven deposits on larger surfaces, it is necessary to apply the coats of paint quickly and wet-on-wet.
Exposure to moisture during the application and drying period may result in damage to the coat in the form of peeling, blistering, premature chalking or spotty wear.
Water-soluble additives can be washed out in the case of severe exposure to moisture (owing to dew, mist, rain and driving rain in particular). In unfavourable cases, these can appear as sticky, slightly shiny run-off stains (leaching of additives). Therefore, protect the coat from any moisture during the drying period. Any run-off stains of additives that are present have no effect on the shelf life of the product and will, in the course of time, be completely removed by any further weathering.
In case of tinted paints, mechanical strain on the surface can lead to changes in colour (so-called brushing effect or breakdown of the filler/pigment). This does not affect the weather resistance.
Do not mix with other coating materials.
In order to achieve a long period of effect of the fungicide/algaecide coat protector, sufficient layer thickness with two coats is necessary. The period of effect is dependent on the condition of the property, the exposure to moisture and the frequency of the outbreak. The permanent prevention of algae or fungus cannot be guaranteed based on the current state of technology. Refer to safety instructions in case of spray application.
Diessner Silicon plus can be used as egalisation coating on new mineral, colour-pigmented top coats. It should be noted that a single-layer egalisation coat serves for improving the visual appearance. Further requirements such as improved weather-resistance and colour fastness as well as improved film protection can only be met with a double-layer coating structure. We therefore recommend a double-layer egalisation coating. (For more notes, refer to BFS datasheet no. 9 and 26)

Substrate preparation
Substrates must be solid, dry, free of dirt, blooming, discolouration, fungal growth, sintered layers, multi-grain layers, chalking layers and separating substances. The substrate must be tested for suitability, adhesiveness and carrying ability. Pay attention to VOB (contracting rules for award of public works contracts), part C, DIN 18363, para. 3, the respective BFS datasheets and the technical datasheets 005.

Note
This technical information is compiled to the best of our knowledge and corresponds to our state-of-the-art application technology. However, you can only obtain non-binding advice as the working method in each individual case is dependent on the condition of the structure to be coated and can only be decided on the basis of the actual surface in question. Conditional exceptions are to be taken into account on site. Liability cannot be derived from the aforementioned information.
Due to the different substructure materials and the working conditions that are out of our control, we recommend conducting sufficient tests in each case to ensure the suitability of our products for the intended procedures and purposes.
All previous versions cease to apply with the publication of this technical datasheet.

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