TECHNICAL INFORMATION NO. 195

Sylitol® Fassadenfarbe (Facade Paint)

Suitable for silicate-based, weatherproof exterior coatings as per German standard DIN 18 363, section 2.4.1.

Product Description

Sylitol® facade paint is a ready-made facade coating material, based on potassium silicate and organic stabilisers. The composition of Sylitol® facade paint complies with the specifications of German standard DIN 18 363, section 2.4.1.
Sylitol® facade paint leads to weatherproof coatings, offers a good opacity (covering/hiding power), a high degree of whiteness, non-fading pigmentation, and is highly capable of capillary diffusion.
Sylitol® facade paint is suitable for coatings on unpainted mineral renders/plasters, solid natural stones without efflorescence, fair-faced sand-lime brickwork, and for the renovation of sound existing silicate-based paints and renders/plasters.

Material Properties

- Weather-resistant.
- Allows sorption.
- CO_2 -permeable.
- Doubly-silicificating, quartz-reinforced.
- Proper adhesion due to silicification on mineral substrates.
- Easy to apply.
- Reaction to fire: Non-combustible, A2 according to German standard DIN 4102.

Packaging/Package Size

- **Standard product:** 5 litres and 12.5 litres

Colours

White and Off-white.

The paint can be tinted with Histolith® colourants in any desired ratio. If more than one bucket is manually tinted, all product must be thoroughly mixed before use in order to avoid colour differences. Quantities of 100 litres or more in individual colours may be ordered ready-tinted ex factory. Check tinted product before applying to avoid colour differences. Always use tinted product of same batch, when applying on seamless surfaces. Brilliant, intensive colour shades may have a lower opacity (hiding/covering power). It is therefore advisable to apply a first coat in a similar hiding pastel tint, based on white. A second finishing coat may be necessary.

Colour Resistance according to BFS Data Sheet No. 26:
Binder / Class: B
Pigmentation / Category: 1

Gloss Level

Matt, G_3

Storage

Keep in a cool, but frost-free place. Keep partially used containers tightly closed. Keep product only in plastic containers. Shelf life: approx. 12 months.

CAPAROL

Technical Data

Characteristics according to DIN EN 1062: Tinting may cause variations.

- Maximum particle (grit) size: < 100 µm, S_1
- Density: Approx. 1.5 g/cm³
- Dry film thickness: 100 - 200 µm, E_3
- Water permeability (w-value): ≤ 0.1 (0.07) [kg/(m² · h^{0,5})] (low), W_3
- Water vapour permeability (sd-value): < 0.14 (0.01) m (high), V_1

Supplementary Product

Sylitol® Konzentrat 111 (Concentrate)
Sylitol® Minera
Sylitol® Compact

Suitability according to Technical Information No. 606 Definition of Application Areas

Interior 1	Interior 2	Interior 3	Exterior 1	Exterior 2
○	+	+	+	+
(–) inapplicable / (○) of limited suitability / (+) suitable				

Application

Suitable Substrates

The substrates must be sound/stable, dry, clean, and free from all substances that may prevent good adhesion. In Germany: Follow VOB, part C, DIN 18 363, section 3.1.10 and 3.2.1.

Substrate Preparation

To obtain evenly coloured coatings it is necessary to provide for a constantly absorbent substrate. Weathered spray and scratch renders/plasters require - in addition to the priming coat with Sylitol® Konzentrat (Concentrate), diluted 2 : 1 with tap water - a texture levelling intermediate coat of Sylitol® Minera, applied with a paint roller. Intensively repaired and slightly cracked surfaces also require one or two liberally applied intermediate coats of Sylitol® Minera.
Apply Sylitol® Minera with a brush on smooth/even substrates and use a paint roller on rough-textured surfaces. To avoid lapping, care should be taken to have a sufficient number of hands on the job. Apply the product wet-on-wet without interruption.

New Renders/Plasters Class PI c (Hydraulic Lime Plasters), Class PII (Lime-Cement Mortars), Class PIII (Cement Mortars) / Minimum Compressive Strength according to DIN EN 998-1: 1 N/mm²:
New renders/plasters must be left untreated for a sufficiently long time, normally for 1 week at 20 °C and 65 % relative humidity. Adverse weather conditions, influenced e.g. by wind or rain, extend the curing process and a correspondingly longer idle period must be respected for proper curing.
Clean soiled surfaces of existing stable render/plaster thoroughly, either manually or mechanically, in compliance with the regulations by e.g. high pressure water jet or high pressure cleaner with sand addon. Wet sand-blasting can only be used for mortar classes PII and PIII. Clean substrates with algae or fungi (mildew/mould) attack by wet-blasting, in compliance with the regulations, then use Capatox according to the manufacturer's recommendations. Coat with algicidal & fungicidal special paint Sylitol® NQG-W, if necessary.

Chalking Renders/Plasters:
Remove all adhesion diminishing chalking/fines layer on the surface with fluosilicate Histolith® Fluat and rinse with tap water.

Rendering with Sintered Skin:
Remove sintered skin (recognisable by a slight, glossy sheen) with fluosilicate Histolith® Fluat, then rinse with tap water.

Render/Plaster Repairs:
Mortars used for surface repairs and filling cracks should match the original render/plaster in strength and texture. Especially suitable for repairs are ready-mixed Trass-lime/Trass-cement based mortars. Repair patches must be allowed to set and dry completely before the application of any paint. The treatment of repaired areas with fluosilicate Histolith® Fluat should never be omitted, always taking care to work in 1–2 widths of the brush beyond the repaired area in order to prevent the formation of efflorescence. Rinse treated surfaces thoroughly with tap water. Where repairs cover relatively large surfaces, the treatment with fluosilicate and rinsing should be extended to the complete surface of existing and new renders/plasters.

Existing Coats of Mineral Paint:
Clean sound, adherent coats dry or wet. Remove unsound, weathered, poorly adherent mineral coats of paint (sand off, abrade or cauterise) and rinse the full surface thoroughly with tap water. Apply one priming coat of Sylitol® Konzentrat 111 (Concentrate), diluted in a 2 : 1 ratio with tap water.

Unsound/Unstable Existing Coats of Emulsion Paints:
Remove unstable coats by suitable means, e.g. mechanically or with a suitable paint stripper and high pressure steam-jet according to local regulations. Non-absorbent substrates, treated with a paint stripper: Prime coat with Sylitol® Minera. Highly absorbent, stripped substrates: Apply one solidifying priming coat of Sylitol® Konzentrat 111 (Concentrate), diluted in a 2 : 1 ratio with tap water. Apply an intermediate coat of Sylitol® Minera.

Sound/Stable Existing Coats of Matt Emulsion Paint:
Remove all soiling and clean slightly chalking surfaces thoroughly with a high pressure water-jet (hydraulic blasting) or by similar suitable means, in compliance with the regulations. Apply an intermediate coat of Sylitol® Compact or Sylitol® Mineralgrund.

Sanding Render/Plaster Surfaces:
Clean by dry wire brushing and treat the full surface with a high pressure water-jet (hydraulic blasting), in compliance with the regulations.

Mineral-/Silicate-Based Thermal Insulation Renders/Plasters:
Clean soiled substrates and surfaces with algae attack carefully by water-jet with low pressure, in compliance with the regulations. Use a cleaning agent, if necessary. Do not clean by mechanical means. Use Capatox for algae or fungi attacked surfaces according to the manufacturer's recommendations. Coat with fungicidal & algicidal special paint Sylitol® NQG-W, if necessary.

Fair-Faced Sand-Lime Brickwork:
Only frost-resistant bricks, free of foreign inclusions, e.g. clods of loam/clay or sand, minerals causing discolouration, etc., are suitable substrates for applying coatings. Jointing must be free of cracks and free from any adhesion diminishing sealing materials or other materials preventing good adhesion. Remove salty efflorescence by dry wire brushing. Use Histolith® Fluat for chalking surfaces (full surface treatment) and rinse thoroughly with tap water. All joint-areas (connections of roof, windows, floors) should comply with current specifications for the use of sand-lime bricks. In Germany: Follow BFS Data Sheet No. 2.

Treatment of Natural Stones:
Natural stones must be solid, dry, and free of efflorescence. Weathered stone surfaces are to be adequately solidified by repeated treatments with stone sealer Histolith® Steinfestiger before a coating is applied. Clean soiled stone surfaces with a high pressure water-jet (hydraulic blasting), in compliance with the regulations. Natural stones should not be repaired with mortar but with suitable stone substitute materials. Allow repairs to set properly, treat professionally with fluosilicate and rinse with tap water.

Rising Damp/Moisture:
Humidity rising from the ground will cause a prematurely deterioration of coatings. Only cross-sectional insulation can be considered to constitute a reliable, durable remedy. Alternatively the application of a restorative render/plaster system is a long-lasting and successful solution (e.g. Histolith® Trass-Sanierputz-Programm). Especially for old buildings it is advantageous to create "drying zones", i.e. zones facilitating the evaporation of moisture by providing a filter stratum of filler gravels between the plinth masonry and the soil.

Method of Application

Facade paint Sylitol® Fassadenfarbe is applicable by paint brush, roller and spraying equipment.
Airless application:
Spray angle: 50°
Nozzle sizes: 0.023" - 0.027"
Spray pressure: 150 - 180 bar
Stir and sieve the paint thoroughly for airless application.

Surface Coating System

On slightly and evenly absorbent renders/plasters, sound (stable/adherent) silicate coatings, on solid and efflorescence-free natural stones, stone substitutes and sand-lime brickwork (masonry):
After suitable pre-treatment, apply one priming coat of the mixture: Sylitol® Fassadenfarbe and Sylitol® Konzentrat 111 (Concentrate) in a 2:1 ratio, by volume. Apply one finishing coat, diluted to a max. of 5 % with Sylitol® Konzentrat 111.
It is advisable to apply one additional intermediate coat of Sylitol® Minera on highly exposed weather sides.

On highly and unevenly absorbent renders/plasters, on sanding render/plasters as well as on existing sound silicate coatings:
After suitable pre-treatment, apply one priming coat of the mixture, Sylitol® Konzentrat 111 (Concentrate) and water in a 2:1 ratio (by volume), liberally by rubbing with a brush.
Prime two times wet-on-wet on highly absorbent renders/plasters.
Apply one intermediate coat, diluted to a max. of 5 % with Sylitol® Konzentrat 111. Apply one finishing coat, undiluted or diluted to a max. of 5 % with Sylitol® Konzentrat 111.

Consumption

Approx. 150 ml/m^2 per coat on an even substrate. On rough-textured surfaces correspondingly more. The exact consumption is best established by a trial coating (test area) on site.

Application Conditions	**Minimum Temperature for Application and Drying:** +8 °C for product, substrate and ambient air.
Drying/Drying Time	**Drying Time between Coats:** At 20 °C and 65 % relative humidity (RH) allow to dry for at least 12 hours between coats. Rainproof after 24 hours. Lower temperature or a higher humidity extend the drying time.
Tool Cleaning	Clean immediately after use with water, adding detergents, if necessary. During breaks keep tools dipped into paint or water.
Note	Do not apply under a glaring sun (on sun heated surfaces), during strong wind, extremely high relative humidity (fog), imminent rain or impending night frost. Protective tarpaulins should be used, if necessary. Do not apply on enamels/varnishes, substrates with salty efflorescence, wood/timber or plastic materials. Sylitol paints are unsuitable for application on horizontal surfaces exposed to water/ rain and moisture. For slightly inclined surfaces (low gradient) proper draining has to be provided. Mechanical loads/scratching on matt facade paints in dark shades may produce bright-toned stripes as a product specific property (no writing resistance). Yellowish/transparent traces with a slightly glossy shine, somewhat sticky, may occur in case of compact, cool substrates or delayed drying caused by the weather (rain, dew, fog). These additives are water-soluble and disappear under the influence of water, e.g. after some intensive rainfalls. The functional capability of the dried coating will not be affected. If such surfaces must be directly coated, the traces should be pre-wetted and, after a short reaction time, completely washed off. Apply one additional priming coat of CapaGrund Universal. The traces do not occur when the coating is applied during suitable climatic conditions. Touching up surfaces is depending on many parameters and may be visible after drying. (In Germany: See BFS Data Sheet No. 25) **Compatibility with other Coating Materials:** Sylitol® products should not be mixed with other coating products, in order to keep their special properties. **Covering Measures:** Cover surrounding areas of the coating surfaces, especially enamel coatings, glass, ceramics, metal, clinker, natural stones, varnished or unvarnished wood, carefully. Remove paint splashes immediately with tap water. Use scaffolding-nets during strong wind and especially during application with roller or spraying equipment. **Constructional Measures:** Cover overhanging building elements as cornices, window sills, copings, etc., professionally, to prevent soiling or moisture penetration through the walls. **Impregnation:** Permanent exposure to splash water affects the durability of the coating. The durability of endangered areas is significantly increased by hydrophobization with Disboxan 452 Wetterschutz. Effect the impregnation after a waiting time of 10 days, at the earliest. Siloxan impregnation with Disboxan 452 also protects cleaned stones surfaces against premature growth of algae, penetration of pollutants and high splash water exposure. **Surfaces with Salty Efflorescence:** Coating of such surfaces must be considered a risk for which we cannot accept responsibility, since even after the most thorough treatment the efflorescence may recur.

Advice

German Certificates	■ Sylitol® Fassadenfarbe Nichtbrennbarkeit ■ Sylitol® Fassadenfarbe Bestimmung der Wasserdampfdiffusionsstromdichte, der Wasserdurchlässigkeitsrate und des organischen Anteils
Please Note (Status as at Date of Publication)	Keep out of reach from children. Use P2 dust filter for grinding. Ensure good ventilation during use and drying. Do not eat, drink or smoke while using the paint. In case of contact with eyes or skin, immediately and thoroughly rinse with water. Do not allow product to enter drains, waterways or soil. Clean utensils immediately after use with soap and water. Due to its alkaline silicate content, the reaction of silicate based coatings is highly alkaline. Hence protect skin and eyes from paint. The areas adjoining the surface to be coated must be carefully masked, in particular glass, ceramics, enamel/varnish coating, clinkers, natural stones, wood and metals. Wash splashes immediately and completely with plenty of clean water. Further information: See Material Safety Data Sheet (MSDS).
Disposal	Materials and all related packaging must be disposed of in a safe way in accordance with the full requirements of the local authorities. Particular attention should be made to removing wastage from site in compliance with standard construction site procedures. In Germany: Only completely emptied containers should be given for recycling. Dispose containers with residues of liquid product via waste collection point accepting old paints and enamels. Dispose dried/hardened product residues as construction site/demolition/municipal or domestic waste.
EU limit value for the VOC content	of this product (category A/c): max. 40 g/l (2010). This product contains max. 10 g/l VOC.
Product Code Paints and Enamels	M-SK01

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Substances of Content - Declaration	Alkaline water glass, acrylic resin dispersion/emulsion, titanium dioxide, mineral pigments and fillers, water, additives.
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