

Sylitol® NQG / Sylitol® NQG-W

Exterior high-tech paint. Provides clean facades due to a unique combination of modern alkali silicate glass with integrated Nano-Quartz Matrix Structure.



Product Description

Field of Application	<p>Sylitol® NQG / Sylitol® NQG-W is a silicate emulsion paint according to German standard DIN 18 363, section 2.4.1 with excellent adhesion on mineral substrates, existing coatings of matt (flat) emulsion or silicone paint and render and on external thermal insulation composite systems (ETICS). The high-quality alkali silicate glass noticeably minimizes the risk of potash efflorescence. Excellent application properties.</p> <p>Sylitol® NQG-W is provided with a preservative against deterioration in the coating film due to algal and fungal (fungi/mildew/mould) attack.</p>
Material Properties	<ul style="list-style-type: none"> ■ Fast-drying after rainfall and when moist with dew. ■ Reduced soiling tendency. ■ Durable and non-chalking. ■ Silicifies treble in order to reach optimised stability. ■ Early rain resistance. ■ Highly weather-resistant and non-fading. ■ Mineral matt (flat) surface. ■ Non-film-forming, highly permeable to CO₂
Material Base / Vehicle	Combination of high-quality alkali silicate glass and hybrid binder (organo-silicate/acrylate).
Packaging/Package Size	<p>Sylitol® NQG</p> <ul style="list-style-type: none"> ■ Standard Product: 12.5 litres ■ ColorExpress: 1.25 litre, 5 litres and 12.5 litres <p>Sylitol® NQG-W</p> <ul style="list-style-type: none"> ■ Standard Product: 12.5 litres
Colours	<p>White.</p> <p>Manual tinting is possible with colourants Histolith® Volltonfarben SI. The product is deliverable in many colour shades ex factory, on request.</p> <p>Tintable with inorganic/mineral colourants (pigment pastes) via the ColorExpress tinting & mixing machine system.</p> <p>Check tinted product before applying to avoid colour differences. Always use tinted paint 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. Possibly a second finishing coat may be necessary.</p> <p>Colour Stability as per German BFS-Merkblatt (Data/Fact Sheet) No. 26: (Binder) Class: A (Pigmentation) Group: 1</p>
Gloss Level	Matt (flat), G ₃



Storage

Keep in a cool, but frost-free place. Keep partially used containers tightly closed. The product must always be stored in plastic buckets/containers. Shelf life: approx. 12 months.

Technical Data

Characteristics according to DIN EN 1062:

- Maximum particle (grit) size: < 100 µm, S₁
- Density: Approx. 1.44 g/cm³
- Dry film thickness: 100 - 200 µm, E₃
- Diffusion-equivalent air layer thickness s_d H₂O: < 0.01 m (high) class V₁
- Water permeability (w-value): 0.09 [kg/(m² · h^{0.5})] (low) W₃

Supplementary Product

Sylitol® NQG Konzentrat (Concentrate)

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 solid, sound/stable, dry, clean, and free from all substances that may prevent good adhesion. Germany: Follow VOB, part C, DIN 18363, section 3.

Substrate Preparation

Provide for an evenly absorbent substrate to achieve uniform surfaces without shade variations. Weathered spray and scratch renders: Apply one priming coat of Sylitol® NQG Konzentrat (Concentrate), mixed with tap water in 2:1 ratio, then apply a texture levelling intermediate roller coat of Sylitol® Minera. Apply 1 to 2 intermediate slurry coats of Sylitol® Minera on repaired, slightly cracked mineral surfaces. On smooth surfaces it is advisable to apply Sylitol® Minera by paint brush, on roughly textured surfaces by paint roller. To avoid lapping (overlap marks), the product should be applied wet-on-wet and without interruption by a sufficient number of hands on the job. Self-tinted product should be prepared in advance and thoroughly mixed in order to avoid noticeable colour differences.

New and Existing, Intact/Stable Thermal Insulation Composite Systems with Surfaces of Synthetic Resin-Bound (Organic), Silicone Resin, Lime (Plc) or Lime-Cement Render (PII) / Minimum Compressive Strength according to DIN EN 998-1: 1 N/mm²:

Clean existing renders by suitable wet cleaning method. Maximum temperature for high pressure water jet: 60 °C. Pressure: max. 60 bar. Allow to dry thoroughly. Coat with Sylitol® NQG / Sylitol® NQG-W according to the existing top coat and substrate conditions as described below.

Renders/Plasters in Mortar Groups/Classes Plc (Hydraulic Lime Plaster), PII (Lime-Cement Mortars) and PIII (Cement Mortars) / Minimum Compressive Strength according to DIN EN 998-1: 1 N/mm²:

New renders/external plasters must be left untreated for a sufficiently long holding time, at least 7 days at 20 °C and 65% relative humidity. Adverse weather conditions, influenced e.g. by wind or rain, extend the curing process and correspondingly longer holding times must be respected. Existing stable renders/external plasters: Clean soiled surfaces manually or mechanically, e.g. by high-pressure cleaning or by high-pressure water jet cleaning mixed with fine quartz sand for efficient cleaning, in compliance with the regulations. Wet sandblasting is only possible for renders/plasters in mortar groups/classes PII and PIII.

Synthetic Resin-Bound (Organic), Silicone, Mineral or Silicate Renders:

Clean soiled substrates and algae infested surfaces by suitable means, in compliance with the regulations. Allow wet cleaned surfaces to dry thoroughly before any further treatment.

Silicate-/Mineral-Based Thermal Insulation Renders:

Clean soiled substrates and algae infested surfaces carefully by water-jet using low pressure, in compliance with the regulations. Use a cleaning agent, if necessary. Do not clean by mechanical means.

Sanding Render Surfaces:

Clean by dry wire brushing followed by full surface cleaning with a high-pressure water jet, in compliance with the regulations.

Chalking Renders:

Remove all adhesion diminishing chalking/fines layers with fluosilicate Histolith® Fluat and rinse thoroughly.

Sintered Renders:

Remove sintered skin (recognisable by a slight, glossy sheen) with fluosilicate Histolith® Fluat and rinse thoroughly.

Render Repairs:

Mortars used for surface repairs and filling cracks should match the existing render in strength and texture. Particularly suitable are ready-mixed Trass-lime/Trass-cement based mortars. Repair patches must be allowed to set and dry thoroughly before the application of any paint. The treatment of repaired areas with fluosilicate Histolith® Fluat is essential, always taking care to work in 1–2 widths of the brush beyond the repaired area. Rinse all repaired areas thoroughly. Where repairs cover relatively large areas, the use of fluosilicate followed by rinsing should be extended to the full surface of existing and new renders.

Existing Coats of Mineral and Silicate Paint:

Clean stable, adherent coats dry or wet. Remove unstable, weathered, poorly adherent coats of mineral paint (sand off, abrade or cauterise) and rinse the full surface thoroughly. Apply one priming coat of Sylitol® NQG Konzentrat (Concentrate), diluted 2 : 1 with tap (potable) water.

Stable Existing Coats of Matt (Flat) Emulsion and Silicone Paint:

Remove all soiling and clean slightly chalking surfaces thoroughly by high-pressure water jet or other suitable means, in compliance with the regulations.

Unstable Existing Coats of Emulsion and Silicone Paint:

Remove thoroughly by suitable means, e.g. mechanically or using paint stripper followed by high-pressure steam jet cleaning, in accordance with local regulations.

Non-absorbent substrates, treated with paint stripper: Apply one priming coat of Sylitol® Minera.

Highly absorbent substrates, treated with paint stripper: Apply one strengthening priming coat of Sylitol® NQG Konzentrat (Concentrate), diluted 2 : 1 with tap water. Apply one intermediate coat of Sylitol® Minera.

Fair-Faced Sand-Lime Brick Masonry:

Only frost-resistant bricks, free of inclusions, e.g. clods of loam/clay or sand, are suitable substrates for applying coatings. Jointing must be free of cracks and free from any adhesion diminishing sealants or other materials/substances preventing good adhesion. Remove salty efflorescence by dry wire brushing.

Chalking surfaces: Treat the full surface with fluosilicate Histolith® Fluat and rinse with tap water.

All joints (connections of roof, windows and floors) must comply with current specification for the use of sand-lime bricks. Germany: Follow BFS-Merkblatt (Data/Fact Sheet) No. 2.

Substrates with Algal or Fungal (Fungi/Mildew/Mould) Attack:

Remove thoroughly by wet-blasting, in compliance with the regulations, then use Capatox or FungiGrund. Recommendation: Allow to dry thoroughly and apply Sylitol® NQG-W for finishing coat.

Treatment of Natural Stones:

Natural stones must be solid, dry and free of any efflorescence. Weathered stone surfaces must be adequately consolidated by repeated use of stone sealer Histolith® Steinfestiger before a coating is applied. Clean soiled stone surfaces using high-pressure water jet, in compliance with the regulations. Natural stones should not be repaired with render mortar but with suitable stone substitute materials. Allow repairs to set/cure, then treat properly with fluosilicate and rinse with tap water.

Rising Damp/Moisture:

Rising damp will cause a premature deterioration of coatings. Only the application of a cross-sectional insulation is a durable problem solution. Alternatively the application of a restorative render system is a good and prolonged solution (e.g. Histolith® Trass-Sanierputz Program). 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

Apply Sylitol® NQG with paint brush, roller or spraying equipment.

Airless application: Spray angle: 50° ; nozzle size: 0.023" - 0.027"
 Spray pressure: 150 - 180 bar. Stir and sieve the paint well before airless application.

Sylitol® NQG-W is applicable with paint brush or roller.

Surface Coating System

Slightly and Evenly Absorbent Substrates:

Apply one priming coat of product, diluted to a max. of 10 % with Sylitol® NQG Konzentrat (Concentrate), if necessary.

Apply one finishing coat of product, diluted to a max. of 5 % with Sylitol®NQG Konzentrat (Concentrate), if necessary.

Highly and Unevenly Absorbent Mineral Substrates:

Apply one priming coat of Sylitol® NQG Konzentrat (Concentrate), diluted 2:1 with tap water.

Apply one intermediate and one finishing coat of product, diluted to a max. of 5 % with Sylitol® NQG Konzentrat (Concentrate), if necessary.

Consumption

Approx. 125 - 150 ml/m² per coat on smooth substrates. On roughly textured surfaces correspondingly more. Determine the exact amount of material required by coating a test area on site.

Application Conditions

Low Temperature Limit 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 allow to dry for at least 12 hours between coats. Rainproof after 24 hours. Lower temperatures and higher humidity extend the drying time.

Tool Cleaning

Clean immediately after use with water, adding detergents, if necessary. During breaks keep tools dipped in paint or water.

Note

Do not apply on sun heated substrates, during strong wind, fog or rain, high relative humidity or imminent rain and frost. Use scaffolding-nets, if necessary. Beware of night frost. Do not apply on enamels/varnishes, substrates with salty efflorescence, wood/timber or plastic materials. Do not apply 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).

Facades subjected to adverse climatic conditions may be attacked by algae and fungi (mildew/mould), due to an abnormal high relative humidity. For such surfaces it is advisable to use our special product Sylitol®NQG-W, provided with a preservative against deterioration in the coating film, delaying algal and fungal growth for a prolonged but not unlimited time, depending e.g. on moisture conditions and intensity of algal/fungal infestation. Therefore a permanent protection cannot be guaranteed. For substrate preparation of infested surfaces FungiGrund can be used as priming coat (instead of OptiGrund) on the thoroughly cleaned and dry surface.

In case of moist weather conditions (rain, dew, fog) yellowish transparent traces of additives, showing a slightly glossy shine and stickiness, may occur on the surface of compact, cool substrates or by means of delayed drying caused by the weather. The traces of additives are water-soluble and will disappear under the influence of a sufficient water quantity, e.g. repeated intensive rainfalls. The quality of the dried coating will not be affected by these changes. In case of direct reworking, all traces of additives must be pre-wetted and completely removed after a short reaction time. An additional priming coat of CapaGrund Universal must be applied. The traces cannot occur when the product is applied under suitable climatic conditions.

Touching up surfaces is depending on many parameters and may be visible after drying.
Germany: See BFS-Merkblatt (Data/Fact Sheet) No. 25.

Copper ions in run-off rain water react with ingredients of Sylitol® NQG/Sylitol® NQG-W and may cause a brownish discolouration. Thus all relevant copper surfaces must be protected against oxidation. Alternatively our product Histolith SolSilikat can be used.

Compatibility with other Paint Products:

In order to retain their specific properties, Sylitol® paint products must not be mixed with other products (except products as described within this Technical Information).

Protective Measures:

Use protective tarpaulins for scaffoldings in case of strong wind.

Constructional Changes:

Projecting parts of buildings, such as cornices, masonry wall crowns, window-sills, etc., should always be carefully and properly protected in order to prevent the formation of dirt markings and excessive penetration of water/moisture into the masonry.

Impregnation (n/a for Sylitol® NQG-W):

Constant exposure to splashing water is detrimental to the durability of coatings. A water repellent impregnation with Disboxan 452 Wetterschutz will highly improve the resistance of coatings (observe a waiting time of at least 10 days). Also for recently cleansed stone surfaces a water repellent siloxane impregnation with Disboxan 452 Wetterschutz will provide effective protection from premature growth of algae, aggressive pollutants and exposure to splashing water.

Surfaces with Salty Efflorescence:

Coating of such surfaces must be considered as a risk for which we cannot accept responsibility, since even after the most thorough treatment the efflorescence may recur.

Advice

Special Risks (Hazard Note) / Safety Advice (Status as at Date of Publication)

Sylitol® NQG-W:

Keep out of reach of children. If swallowed, seek medical advice immediately and show the container or label (intestinal bacteria can be affected). Do not empty into drains, water courses or into the ground. Use P2 dust filter for grinding. Due to its potassium 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. Ensure good ventilation during use and drying. Do not eat, drink or smoke while using the product. In case of contact with eyes or skin, immediately and thoroughly rinse with water. Clean utensils immediately after use with soap and water. Apply by brush or paint roller only.

According to European Regulation 528/2012 this product is defined as a "treated article" (not a biocidal product) and contains the following biocidal substances: Carbendazim (CAS-No. 10605-21-7), Isoproturon (CAS-No. 34123-59-6), Terbutryn (CAS-No. 886-50-0), 2-Octyl-2H-isothiazol-3-on (CAS-No. 26530-20-1).

Please Note (Status as at Date of Publication)

Sylitol® NQG:

Keep out of reach from children. Ensure good ventilation during use and drying. Do not eat, drink or smoke while using the product. 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. Do not breathe spray dust.

Due to its potassium 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.

Germany: Only completely empty containers should be handed in 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

Sylitol NQG: M-SK01 (Germany)

Sylitol NQG-W: M-SK01 F (Germany)

Substances of Content - Declaration

Sylitol® NQG:

Hybrid binder (organo-silicate/acrylate), alkali silicate glass (waterglass), silicates, mineral fillers, water, film forming agent, additives.

Sylitol® NQG-W:

Hybrid binder (organo-silicate/acrylate), alkali silicate glass (waterglass), silicates, mineral fillers, water, film forming agent, additives, film preservatives (Terbutryn, Zinc pyrithione, Octylisothiazolinone).

Further Details

See Material Safety Data Sheets (MSDS).

Technical Assistance

As it is impossible to list herein the wide variety of substrates and their specific problems, please request our technical assistance in case of queries. We will describe appropriate working methods, if a substrate not specified above is to be coated.

Customer Service Centre

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All suggestions and application instructions herein are based on our latest technical experience. Due to the wide variety of individual project conditions, we cannot be held responsible for their content. These instructions do not release the purchaser/ applicator from his responsibility to determine the suitability of the product in consideration of the project characteristics. These instructions are to be considered void when a new edition is released. Our general conditions of sale and delivery in their latest edition apply. This document is a translation of our German Technical Information No.1274 · Sylitol® NQG / Sylitol® NQG-W · Issued: April 2016