

AmphiSilan

Capillary-hydrophobic, mineral matt, silicon-resin based exterior paint. Highly water-repellent. New binder/filler combination for clean facades.

Product Description

Field of Application:

For rain repellent, highly water vapour permeable coatings on exterior renders/plasters and mineral substrates. For renovation of adherent silicate paints, matt dispersion paints or synthetic renders/plasters and intact external thermal insulation composite systems (ETICS / EWI).

AmphiSilan combines the advantages of approved dispersion paints with those of the classic silicate paints.

AmphiSilan has a mineral basic structure, is non-film-forming, highly permeable to water vapour and carbon dioxide, and results in a mineral matt surface appearance, reminiscent of limewash.

These properties make AmphiSilan an ideal choice for preservative coatings on historical monuments and for highly calcareous renders/plasters.

Properties:

Water-thinnable, ecologically compatible, low odour. – Weatherproof. – Highly water-repellent. – Low surface tension, no thermo-plasticity. – Soiling-minimised, keeps the exterior clean for a long period. – Non-film-forming, micro-porous. – Forms a capillary active dry zone. – Permeable to CO₂. Good coverage. – Resistant to aggressive air pollutants. – Easy and elegant application. Contains special pigments with photocatalytic effect.

Characteristics to DIN EN 13 300: AmphiSilan

- **Gloss level:** matt G₃
- **Dry film thickness:** 100 – 200µm E₃
- **Max. particle size:** <100 µm S₁
- **Water vapour permeability:** (s_d-value): 0.05 m (high) V₁
- **Water permeability:** (w-value): 0.08 [kg/(m² · h^{0.5})] (low) W₃

Packaging of Standard Product:

ColorExpress:

1.25 lit., 2.5 lit., 7.5 lit. and 12.5 lit.

DAW Export Product (WE2 · D-E-P-GB):

2.5 lit., 5 lit., 10 lit. and 15 lit.

Base 1 – white, can be applied untinted
B 2, B 3 – only to be used in tinted form

AmphiSilan Compact

- **Gloss level:** matt G₃
- **Dry film thickness:** 100 – 200µm E₃
- **Max. particle size:** <300 µm S₂
- **Water vapour permeability:** (s_d-value): 0.14 m (high) V₁
- **Water permeability:** (w-value): ≤ 0.1 [kg/(m² · h^{0.5})] (low) W₃

Colour:

White.

AmphiSilan is self-tonable in all the 228 shades/hues of the AmphiSilan colour card along with AmphiSilan full colours.

For self-tinting purposes the entire required quantity of material must be prepared and mixed in advance in order to avoid differences of shade in the applied coating.

Orders for 100 lit. or more per individual shades can be ready-tinted at the factory. AmphiSilan Base 1–3 can be tinted via the ColorExpress machine system in (limited) shades of current colour tone collections.

AmphiSilan Compact and AmphiSilan Grundierfarbe can be tinted via the ColorExpress machine system in current colour tone collections in light pastel tints up to a luminosity of approx. 70.

Brilliant, intensive tints, e.g. yellow, orange, red, etc. show a lower coverage. It is therefore recommended to apply a first coat in a similar hiding pastel tint, based on white. Possibly a second finishing coat may be necessary.

Vehicle:

Silicone resin emulsion.

Density:

Approx. 1.5 g/cm³

Storage:

Cool, but frost-free. Shelf life is 12 months.



WE2 export product



standard product

Please Note (Status of September 2006):

Keep out of reach of children. Protect eyes and skin from paint splashes. On contact with eyes or skin, rinse immediately with plenty of water. Do not breathe spray fumes. Do not empty into drains, water courses and onto the ground. Cover the surroundings thoroughly to protect from splashes. Wash off splashes on enamels, glass, ceramics, metals and natural stones immediately with plenty of water.

Further information: See Safety Data Sheets.

Disposal:

AmphiSilan, AmphiSilan-Compact, AmphiSilan-Volltonfarbe, AmphiSilan-Grundierfarbe, AmphiSilan-Tiefgrund LF:

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 material as remnants of water-based paints and dried material as hardened paints waste or via domestic waste.

AmphiSilan-Grundfestiger: Only completely emptied containers should be given for recycling. Dispose packaging with residues of liquid material via collecting point for old enamels.

Product-Code for Paints & Enamels:

M-SF01

Substances of Content · Declaration:

Silicon resin, acrylic resin dispersion, titanium dioxide, calcium carbonate, silicates, water, film forming agent, additives, preservatives (microbiocides).



AmphiSilan-Compact

Water-thinnable, filling, silicon-resin based intermediate and finishing coat. For optimum levelling of non-uniformly textured mineral renders/plasters or for texture-equalisation of re-plastered and repaired surface areas. Suitable for filling fine shrinkage cracks of renders/plasters. AmphiSilan-Compact is weatherproof, rain-repellent, highly water-vapour and CO₂ permeable. May be tinted via ColorExpress up to a luminosity of approx. 60 to all current colour collections.

Density: Approx. 1.7 g/cm³

Product-Code for Paints & Enamels:
M-SF01

Substances of Content - Declaration:
Silicone resin, acrylic resin dispersion, titanium dioxide, calcium carbonate, silicates, water, film forming agent, additives, preservatives (microbiocides).

Standard Packaging: 15 kg
DAW Export Product (WE2 - D-E-P-GB):
2.5 lit., 5 lit., 10 lit. and 15 lit.



AmphiSilan-Volltonfarben

Water-thinnable, lightfast, silicone resin-based, ecologically compatible full colours / Colourants for AmphiSilan exterior paint, -Compact, -Grundierfarbe and for intensively coloured coatings or decorations. AmphiSilan-Volltonfarben in pure form are to be used acc. to the recommendations for the preparation of substrates and the application as specified in this Technical Information.

Colours: Yellow, Green, Cobalt Blue, Ochre, Oxide Brown, Oxide Orange, Oxide Red, Black, Ultramarine Blue, Umber.

Density: Approx. 1.5 g/cm³

Product-Code for Paints & Enamels:
M-SF01

Substances of Content - Declaration:
Silicone resin, acrylic resin dispersion, coloured pigments, titanium dioxide, calcium carbonate, silicates, water, glycol ether, additives, preservatives (microbiocides).

Packaging: 250 ml, 750 ml,
2.5 lit., 5 lit. and 12.5 lit.



AmphiSilan-Grundierfarbe

Water-thinnable, ecologically compatible, special priming paint. Promotes the adhesion on compact, smooth substrates and solidifies aged synthetic resin-bound renders/plasters before the application of AmphiSilan exterior paint or AmphiSilan-Compact.

Density: Approx. 1.4 g/cm³

Product-Code for Paints & Enamels:
M-GP01

Substances of Content - Declaration:
Acrylic resin dispersion, titanium dioxide, silicates, calcium carbonate, water, film forming agent, additives, preservatives.

Packaging: 12.5 lit.



AmphiSilan Primer (WE2) / AmphiSilan-Tiefgrund LF

Solvent-free special primer with hydrophobic action. Low odour, ecologically compatible. Solidifies the substrate and promotes uniform absorbency on highly porous, absorbent, slightly sanding renders/plasters and sandlime brick masonry.

Density: Approx. 1.0 g/cm³

Product-Code for Paints & Enamels:
M-GF01

Substances of Content - Declaration:
Acryl-hydrosol, poly-siloxane, water, additives, preservatives (microbiocides).

AmphiSilan Primer / DAW Export (WE2):
10 lit.

AmphiSilan Tiefgrund LF: 10 lit.



AmphiSilan-Grundfestiger

Solvent-based special primer for mineral substrates and existing silicate coatings. Solidifies sanding, chalking or highly absorbent surfaces.

Do not use on External Thermal Insulation Composite Systems (ETICS / EWI) with EPS boards or on polystyrene containing renders/plasters.

May be used on normal and slightly absorbent substrates, thinned up to 20% with methylated spirits or nitro-thinner. Apply two coats on highly absorbent surfaces, wet-on-wet without thinning.

The primer must not form a glossy film on the surface.

Density: Approx. 0.88 g/cm³

Product-Code for Paints & Enamels:
M-GF05

Substances of Content - Declaration:
Polyvinyl acetate resin, Solvent Naptha, ethanol, ethyl acetate, additives.

Packaging: 10 lit.

Application

System of Application:

First or intermediate coat with AmphiSilan, thinned max. 10% with tap (potable) water. On rough-textured substrates, depending on the texture and absorbency, for the intermediate and finishing coats a little higher dilution is required (spread intensively). The degree of dilution should be established by a trial application. For equalising non-uniformly applied renders/plasters and for filling fine cracks on render surfaces, an intermediate coat of AmphiSilan-Compact can be applied, thinned max. 5 to 10% with tap (potable) water. Apply a finishing coat of AmphiSilan, thinned max. 5 to 10% with tap water. Especially if intensive colours are used, the dilution of 10% is necessary for the finishing coat to achieve a uniform surface, free of streaks. Observe a minimum waiting time of 12 hours between the coats.

Method of Application:

Apply with paint-brush, roller and airless spraying units.

Airless application:

AmphiSilan/AmphiSilan-Compact:

Spraying angle: 50°
Nozzle size: 0.021" – 0.026"
Spraying pressure: 150 – 180 bar

AmphiSilan-Grundierfarbe:

Spraying angle: 50°
Nozzle size: 0.026" – 0.031"
Spraying pressure: 150 – 180 bar

AmphiSilan-Tiefgrund LF/Primer,

AmphiSilan-Grundfestiger:

Spraying angle: 20 – 50°
Nozzle size: 0.015"
Spraying pressure: 60 bar

Clean tools immediately after use with water. Tools used for AmphiSilan-Grundfestiger coatings should be cleaned with methylated spirit or nitro-thinners.

Consumption:

The given consumption values refer to one application on smooth substrates, rough-textured surfaces will require correspondingly more material.

The exact rate of consumption is best established by a trial application.

AmphiSilan

Approx. 150 – 200 ml/m²

AmphiSilan-Compact

Approx. 350 – 400 g/m²

AmphiSilan Primer / -Tiefgrund LF

Approx. 150 – 200 ml/m² depending on the condition and absorbency of the substrate.

AmphiSilan-Grundierfarbe

Approx. 150 – 200 ml/m² depending on the condition and absorbency of the substrate.

AmphiSilan-Grundfestiger

Approx. 150 – 200 ml/m² and more, depending on the condition and absorbency of the substrate.

Minimum Temperature for Application and Drying:

+5 °C for material, substrate and surrounding air.

Drying Times:

At 20 °C and 65% relative humidity: surface-dry after 2 – 3 hours, recoatable after 12 hrs. Completely dry after 2 – 3 days. Lower temperatures and a higher relative humidity will lengthen the drying process.

Note:

Observe the recommendations of VOB, Part C, DIN 18 363, Para. 3.1.10.

The materials should not be applied under a glaring sun, during strong wind, fog, high relative humidity, or imminent rain or frost.

To avoid lapping on large surfaces, the material should always be applied wet-on-wet and without interruptions.

For airless application stir well and sieve the material.

Do not apply AmphiSilan materials on horizontal surfaces exposed to rain/water or moisture.

Facades in special climatic conditions (high degree of moisture) or subjected to a higher influence of atmospheric exposure: It is recommended to apply our special product ThermoSan with algicidal and fungicidal agents to counteract the forming of organic growth (fungi & algae).

Surfaces primed with AmphiSilan-Grundfestiger: Allow to dry completely before any other treatment (for min. 24 hrs. at 20 °C) to avoid penetration of solvents.

Recommendation for repairs: The original material should be thinned with 10% of AmphiSilan-Tiefgrund LF to achieve less visible repairs of tinted AmphiSilan coatings.

Compatibility with other Paint Materials:

Do not mix AmphiSilan materials with other paint materials, in particular not with silicate or synthetic resin dispersion-based colourants or concentrated tints.

Suitable Substrates and their Preparation

The substrate must be sound, dry, clean, and free from all materials that may prevent good adhesion.

Observe the recommendations of VOB, Part C, DIN 18 363, Paragraph 3.

Renderers/Plasters:

Class P Ic Hydraulic Lime Mortars

Class P II Lime-Cement Mortars

Class P III Cement Mortars

Allow new renderers/plasters to set for 2 – 4 weeks before the application of any paint or primer. Repairs must have adequate time to cure and dry.

Remove chalking or sintered layers from the surface. Clean existing render/plaster coatings by mechanical means or with a high-pressure water jet, in compliance with the regulations. Allow the surface to dry well. Prime with AmphiSilan Primer /-Tiefgrund LF. Prime chalking, sanding or otherwise critical substrates with AmphiSilan-Grundfestiger, if necessary twice, wet-on-wet.

Existing Coatings of Silicate Paints or Renderers/Plasters:

Clean adherent, sound coatings mechanically or with high-pressure water jet, in compliance with the regulations.

Remove unsound, weathered coatings by abrading, grinding or by scraping off. Prime with AmphiSilan-Grundfestiger.

Sound Existing Synthetic Resin-Bound Renderers/Plasters and Intact ETICS/EWI Systems:

Clean existing renderers/plasters by suitable means. Allow wet surfaces to dry well. Apply a priming coat with AmphiSilan-Grundierfarbe.

New synthetic renderers/plasters can be coated without any pre-treatment. For new mineral renderers/plasters apply a priming coat with AmphiSilan-Grundierfarbe.

Sound Coatings of Dispersion Paint:

Roughen the surface of slightly glossy coatings.

Clean soiled or chalking coatings with a high-pressure water jet, in compliance with the regulations. Allow the surface to dry well.

Apply a priming coat with AmphiSilan-Grundierfarbe.

Unsound Coatings of Enamel, Dispersion Paint or Synthetic Resin-Bound Renderers/Plasters:

Remove existing coatings by suitable means e.g. mechanically or by using paint stripper and subsequently cleaning with a steam jet, in compliance with the regulations. Allow the substrate to dry well.

Apply a priming coat with AmphiSilan-Grundierfarbe.

Prime chalking, sanding, absorbent substrates with AmphiSilan-Grundfestiger.

Apply an intermediate coat with AmphiSilan-Compact.

Fair-Faced Brick Masonry:

Only frost-resistant bricks and clinkers free of foreign inclusions are suitable for coatings.

The jointing must be free of cracks and salts (salty efflorescence).

Prime with AmphiSilan-Grundfestiger.

If brown discolouration appear on the intermediate coat of AmphiSilan or AmphiSilan-Compact, apply Duparol (solvent-based) for the finishing coat.

Sandlime Brick Masonry:

Only frost-resistant bricks free of foreign inclusions like sand or clay/loam are suitable for being coated. Jointing must be free of cracks. Clean chalking surfaces, remove salty efflorescence by dry brushing.

Observe the recommendations of BFS Data Sheet No. 2.

Prime with AmphiSilan Primer/-Tiefgrund LF. Apply an intermediate coat with AmphiSilan-Compact.

Surfaces Infested with Organic Growth (Fungi, Algae):

Coat with the fungicidal and algicidal special paint ThermoSan (Technical Information No. 156).

Surfaces with Salty Efflorescence:

Remove completely by dry brushing. Prime with AmphiSilan-Grundfestiger. 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.

Defects:

Repair small defects with Caparol-Fassaden-Feinspachtel, deeper damages up to 20 mm preferably with Capalith-Fassadenspachtel P and prime repairs subsequently. Technical Information No. 710 and No. 720.


Advice

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.

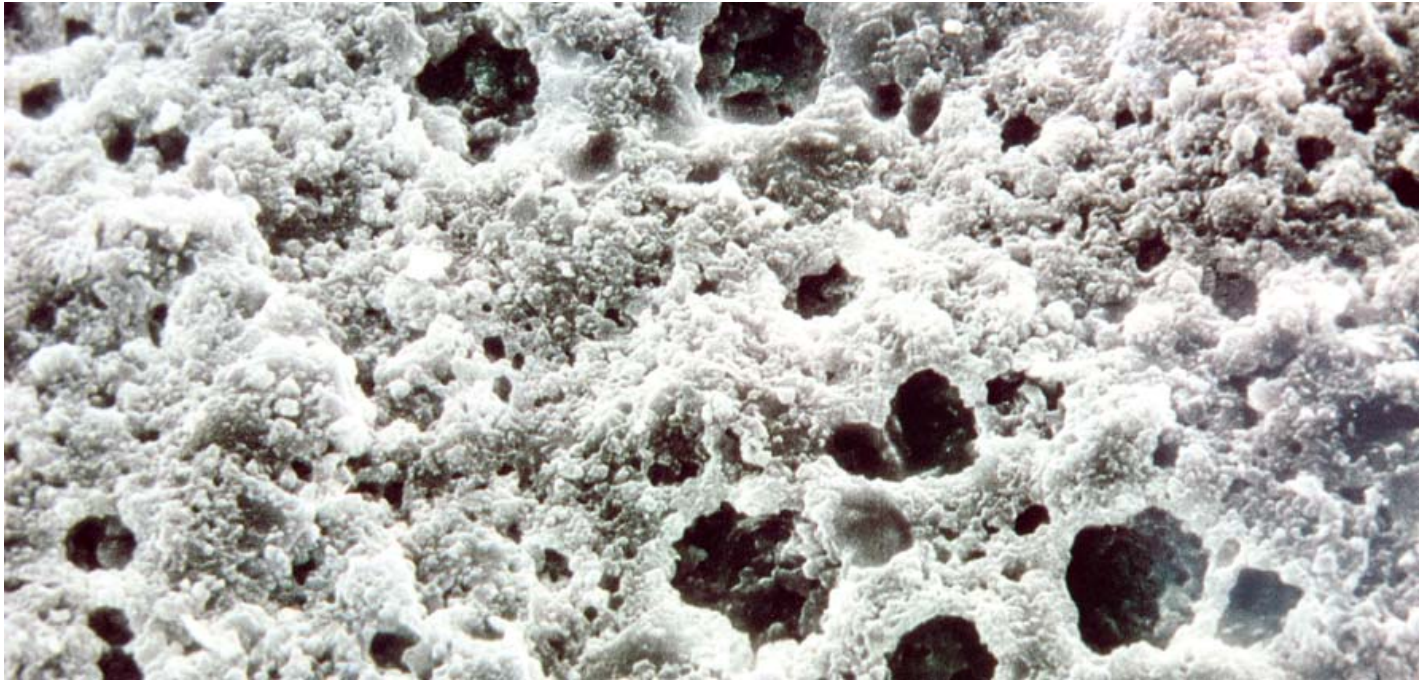
We will describe appropriate working methods, if a substrate not specified above is to be coated.

Customer Service Center:

 (+49) 06154 / 711710

Fax No.: (+49) 0 6154 / 711711

e-mail: kundenservicecenter@caparol.de



Evidence of micro-porosity · AmphoSilan coating (exterior paint), magnified a thousand times.

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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 Technical Information is a translation of the German Technical Information No. 145 AmphoSilan, release date: February 2006

CAPAROL Farben Lacke Bautenschutz GmbH · P.O.B. 1264 · D-64369 Ober-Ramstadt · Phone + 49 (061 54) 71-0 · Fax + 49 (061 54) 71-13 91 · Internet: www.caparol.com
Berlin Office: Schnellerstr. 141 · D-12439 Berlin · Phone +49 (030) 63 94 6-0 · Fax +49 (030) 63 94 62 88

DAW International Relations: **Deutsche Amphibolin-Werke von Robert Murjahn Stiftung & Co KG** · P.O.B. 1264 · D-64369 Ober-Ramstadt · Phone +49 (061 54) 71-12 74
Fax +49 (061 54) 71-12 64 · E-mail export@daw.de · Internet www.caparol.com