

PermaSilan

Elastic, silicone resin-based facade paint for exterior renders with surface cracks. Diffusion-capable.



Product Description

Field of Application	Facade paint with good water vapour permeability. Covers surface cracks in exterior render coatings. Also suitable for use on non-stop cracks (piercing cracks in render coatings as per German BFS Data Sheet No. 19), if combined with FibroSil. Suitable for use on mineral renders in mortar groups/classes PII and PIII, concrete, sound existing plasto-elastic coatings, stable paint coatings and existing ETICS/EWI systems.
Material Properties	<ul style="list-style-type: none"> ■ Water-dilutable, ecologically compatible, low odour. ■ Weather-resistant. ■ Easy to apply. ■ Mineral surface appearance. ■ Solvent-free. ■ Low tension. ■ Elastic even at low temperatures. ■ High adhesion. ■ Crack bridging. ■ Alkali-resistant, hence unsaponifiable. ■ PermaSilan is provided with a preservative against deterioration in the coating film due to algae and fungal attack.
Material Base / Vehicle	Combination of silicone resin and synthetic resin dispersion/emulsion according to German standard DIN 55 945.
Packaging/Package Size	<ul style="list-style-type: none"> ■ Standard: 12.5 litres ■ ColorExpress: 5 litres, 12.5 litres
Colours	<p>White.</p> <p>PermaSilan is tintable with AmphiSilan colourants. 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 colour shades may be ordered ready-tinted ex factory.</p> <p>PermaSilan can be tinted to all current colour collections via the ColorExpress tinting & mixing machine system. Check tinted paint before applying to avoid colour differences. Always use product of same batch, when applying on seamless surfaces. Brilliant, intensive colours may have a lower opacity. 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 Resistance according to BFS Data Sheet No. 26: Binder: Class B Pigmentation: Group 1</p>
Gloss Level	Matt (flat), G ₃
Storage	Keep in a cool, but frost-free place.



Technical Data

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

- Maximum particle (grit) size: < 100 µm, S₁
- Density: Approx. 1.4 g/cm³.
- Dry film thickness: 100 - 200 µm, E₃
- Water permeability (w-value): ≤ 0.1 [kg/(m² · h^{0.5})] (low), W₃
- Crack bridging classes:

Crack bridging

Surface coating system:

- 2 x 200 ml PermaSilan, Class: A₂ (> 250 µm)
- 3 x 200 ml PermaSilan, Class: A₃ (> 500 µm)
- 1 x 700 g FibroSil and 2 x 200 ml PermaSilan, Class: A₃ (> 500 µm)

- Water vapour permeability (sd-value): ≥ 0.14 – < 1.4 m (medium), V₂

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 substrate 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.

Substrate Preparation

New and Existing, Sound/Stable ETICS/EWI Systems with Surfaces of Synthetic Resin-Bound (Organic) Render, Silicone Resin Render, Lime Cement Plaster (PII) / Minimum Compressive Strength according to DIN EN 998-1: 1.5 N/mm²:

Clean existing render/plaster by suitable wet cleaning method. Maximum temperature for high-pressure water jet: 60 °C. Pressure: max. 60 bar.

Allow to dry thoroughly. Coat with PermaSilan according to the type of finish render and details as mentioned below.

Exterior Renders in Mortar Groups/Classes PII (Lime-Cement Mortars), PIII (Cement Mortars) / Minimum Compressive Strength according to DIN EN 998-1: 1.5 N/mm²:

New renders must be left untreated for a sufficiently long holding time, normally for 2 weeks 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. An additional priming coat of CapaGrund Universal minimises the risk of efflorescence on alkaline finishing coats of mortar groups PII or PIII and the substrate is recoatable after a holding time of 7 days.

Existing Renders:

Repairs must have adequate time to cure and dry. Prime with Dupa-grund or use AmphiSilan-Putzfestiger on EPS boards for ETICS/EWI systems.

New Silicate Finish Renders:

Coat with products of our silicate based Syllitol product range.

Existing Silicate Paints and Renders:

Clean adherent/stable coatings mechanically or with high-pressure water jet, in compliance with the regulations. Remove unstable, weathered coatings by abrading, sanding/grinding or scraping off. Prime with AmphiSilan-Putzfestiger.

Autoclaved Aerated Concrete (AAC) / Cellular Concrete with Stable Existing Coatings:

Clean solid/stable existing surfaces. Apply one priming coat of CapaGrund Universal. Please refer to our Disbon program for the renovation of unstable AAC coatings.

Concrete:

Concrete surfaces with deposits of dirt or fines (sintered layer) must be cleaned by mechanical means or using high-pressure water jet, in compliance with the regulations. Apply one priming coat of CapaGrund Universal on slightly absorbent or smooth surfaces. Prime chalking surfaces with Dupa-grund.

Sound/Stable Coats of Emulsion Paint:

Clean soiled, chalking coatings by high-pressure water jet, in compliance with the regulations. Apply one priming coat of CapaGrund Universal. If other cleaning methods are used (washing, wire brushing, hosing with water), prime with Dupa-grund or use AmphiSilan-Putzfestiger on EPS thermal insulation boards.

Sound/Stable Existing Plasto-Elastic Emulsion Paint Coatings, e.g. Cap-elast Surfaces:

Clean soiled, chalking coatings by high-pressure water jet, in compliance with the regulations. Allow the substrate to dry thoroughly and apply one priming coat of CapaGrund Universal.

Sound/Stable Coatings of Synthetic (Organic) or Silicone Resin Render:

Clean existing coatings by suitable means. Allow wet cleaned surfaces to dry thoroughly before any further treatment.

Unstable Coats of Mineral Paint:

Carefully remove to the stable substrate (abrade, brush off, scrape off, use high-pressure water jet in compliance with the regulations, or by other suitable means). Allow wet cleaned surfaces to dry thoroughly before any further treatment. Prime with Dupa-grund.

Unstable Coatings of Emulsion Paint or Synthetic (Organic) Render:

Remove completely by suitable means, e.g. mechanically or by stripping and subsequent cleaning by high-pressure water jet, in compliance with the regulations. Apply one priming coat of CapaGrund Universal on slightly absorbent or smooth surfaces. Prime chalking, sanding, absorbent surfaces with Dupa-grund.

Surfaces Contaminated with Factory Fumes or Soot:

Clean by suitable means, e.g. using high-pressure water jet, in compliance with the regulations and allow to dry well. Apply one priming coat of CapaGrund Universal on slightly absorbent or smooth surfaces. Prime chalking, sanding, absorbent surfaces with Dupa-grund or use AmphiSilan-Putzfestiger on EPS thermal insulation boards.

Surfaces Infested with Organic Growth:

Remove algae or fungal attack (fungi/mildew/mould) by wet blasting, in compliance with the regulations. Then use Capatox or FungiGrund and allow to dry thoroughly. Apply one priming coat of CapaGrund Universal on slightly absorbent or smooth surfaces. Prime chalking, sanding, absorbent surfaces with Dupa-grund or use AmphiSilan-Putzfestiger on EPS thermal insulation boards.

Cracks Due to Substrate, Construction or Ground:

Coat with Cap-elast.

Surfaces with Salty Efflorescence:

Remove salty efflorescence by dry wire brushing. Prime with Dupa-grund. 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 should be repaired with Histolith-Renovierspachtel. Prime the repaired areas.

Method of Application

Apply with paint brush or roller. Clean tools immediately after use with water.

Surface Coating System

Priming Coat

Apply Dupa-grund or CapaGrund Universal, depending on the substrate.
Further details: See paragraph headed »Suitable Substrates / Substrate Preparation«.

Intermediate Coat

For renders/plasters with surface cracks: Apply PermaSilan, undiluted.
For render/plaster piercing cracks: Priming or intermediate coat of FibroSil (follow Technical Information No. 166). Second intermediate coat of PermaSilan.

Finishing Coat

Apply PermaSilan, undiluted.
To obtain a crack bridging effect, one intermediate and one finishing coat of PermaSilan must be applied.

Consumption

Minimum 200 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

Lower Temperature Limit for Application and Drying:
+5 °C for product, substrate and ambient air.

Drying/Drying Time

At +20 °C and 65% relative humidity surface-dry and recoatable after 12 hours. Completely dry and ready for stress after approx. 3 days. Lower temperatures and higher humidity extend the drying time.

Note

Do not apply on sun heated substrates, during strong wind, fog or rain, high relative humidity or imminent rain and frost. To avoid lapping, the material should be applied wet-on-wet and without interruption.

Do not apply on horizontal surfaces exposed to rain/water or moisture. Do not use on calcareous substrates and lightweight renders. Seal joints of windows, doors and window sills professionally with a permanent elastic sealant and inspect them at regular intervals. Static cracks are liable to extreme movements. Therefore a life-long and invisible crack covering treatment by paint material cannot generally be guaranteed.

This product is provided with a preservative against deterioration in the coating film due to algae and fungal attack for prolonged - but not unlimited - protection, depending on the degree of moisture and intensity of organic infestation. A permanent protection cannot be guaranteed. Mechanical loads/scratching on matt facade paints in dark shades may produce bright-toned stripes as a product specific property (no writing resistance).

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 material is applied under 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)

Advice

German Certificates

- PermaSilan Wasserdurchlässigkeitsrate (water vapour permeability rate)
- PermaSilan Wasserdampfdiffusionsstromdichte (vapour diffusion flow frequency)

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

Harmful to aquatic life with long lasting effects. 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. 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. Use P2 dust filter for grinding. Apply by brush or paint roller only.

Contains: 1,2-benzisothiazol-3(2H)-one, 2-methyl-2H-isothiazol-3-one. May produce an allergic reaction.

In Germany: Advice for allergy sufferers with isothiazolinone allergy: Hotline 0180/5308928 (0.14 €/minute from German landline, MTS max. 0.42 €/minute).

According to European Regulation 528/2012 this product is defined as a "treated article" (not a biocidal product) and contains the following biocidal substances: Terbutryn (CAS-No. 886-50-0), Zinkpyrithion (CAS-No. 13463-41-7), 2-Octyl-2H-isothiazol-3-on (CAS-No. 26530-20-1).

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 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. 5 g/l VOC.

Product Code Paints and Enamels

M-SF01F (Germany)

Substances of Content - Declaration

Polyacrylate resin, silicone resin, titanium dioxide, barium sulphate, silicates, calcium carbonate, water, additives, preservatives (methyl-/benzisothiazolinone), film preservative (octylisothiazolinone, terbutryne, zincpyrithione).

Further Details

See Material Safety Data Sheet (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

Tel.: (+49) 0 61 54 / 71 17 10
Fax: (+49) 0 61 54 / 71 17 11
e-mail: kundenservicecenter@caparol.de

International Distribution: Please see www.caparol.com

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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.161 · PermaSilan · Issued: October 2014