

ThermoSan

Innovative silicone-resin binder combination with integrated Nano-Quartz Matrix Structure providing clean facades. Protected against algal and fungal attack. Consequent further development of the Caparol Clean Concept.



Product Description

Field of Application	<p>High-tech facade paint with the essential benefit: Organically cross-linked nano-quartz particles form a compact, mineral-hard, three-dimensional quartz matrix structure against soiling and keep facades clean for a longer period.</p> <p>The special silicone resin/binder combination effectuates water-repellent, highly water vapour permeable facade paint coatings on mineral and synthetic resin-bound (organic) renders/plasters, coated or uncoated. ThermoSan is suitable for all types of current, sound ETICS/EWI system surface coatings, e.g. synthetic resin (organic) renders and silicone resin renders, lime plasters and lime-cement plasters.</p>
Material Properties	<ul style="list-style-type: none"> ■ Provided with an encapsulated preservative against deterioration in the coating film due to algal and fungal attack. ■ Alkali-resistant, hence unsaponifiable. ■ Highly CO₂ permeable. ■ Non-film-forming, micro-porous. ■ ThermoSan is able to wash fine cracks in render/plaster surfaces. ■ Contains special pigments, showing a photocatalytic effect. ■ Reduces noticeable marks on dark colours, if surfaces are subjected to mechanical loads.
Material Base / Vehicle	Combined silicone resin emulsion and new type of hybrid binder, on an organic/inorganic basis.
Packaging/Package Size	<ul style="list-style-type: none"> ■ Standard Product: 12.5 litres ■ ColorExpress: 1.25 litres, 7.5 litres and 12.5 litres
Colours	<p>White.</p> <p>ThermoSan can be tinted 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.</p> <p>Quantities of 100 litres or more in individual colours may be ordered ready-tinted ex factory. ThermoSan is tintable via the ColorExpress tinting & mixing machine system in limited colour shades of current colour collections. Check tinted product before applying to avoid colour differences. Always use tinted paint of same batch, when applying on seamless surfaces.</p> <p>Brilliant, intensive colours 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.</p> <p>Colour Resistance according to BFS Data 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.



Technical Data

Characteristics according to DIN EN 1062:

- Maximum particle (grit) size: < 100 µm, S₁
- Density: Approx. 1.5 g/cm³
- Dry film thickness: 100 - 200 µm, E₃
- Water permeability (w-value): < 0.1 [kg/(m² · h^{0.5})] (low), W₃
- Water vapour permeability (sd-value): < 0.14 m (high), V₁

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

Clean surfaces with algal or fungal attack (fungi/mildew/mould growth) by water jet, in compliance with the regulations. Then use Capatox or FungiGrund and allow to dry.

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

Clean existing renders/plasters by suitable wet cleaning method. Maximum temperature for high pressure water jet: 60 °C. Pressure: max. 60 bar. Allow to dry thoroughly. Coat with ThermoSan according to the type of existing finish render and details as mentioned below.

Renders/Plasters in Mortar Groups/Classes Plc (Lime Plaster), PII (Lime-Cement Mortars), 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 2 weeks at 20 °C and 65 % relative humidity. Adverse weather conditions, e.g. influenced by wind or rain, extend the curing process and correspondingly longer holding times must be respected. Coat with ThermoSan, adding 10 % of AmphiSilan-Tiefgrund.

The risk of calcareous efflorescence on alkaline finish renders of mortar classes Plc, PII and PIII can be minimised by an additional priming coat of CapaGrund Universal and the finishing render/plaster may be coated after a holding time of 7 days.

Existing Renders/Plasters:

Repairs must have adequate time to cure and dry. Substrates with normal absorbency can be coated with ThermoSan, adding up to max. 10 % of AmphiSilan-Tiefgrund. Prime highly porous, absorbent, slightly sanding renders/plasters with AmphiSilan-Tiefgrund.

Prime highly sanding, chalking renders/plasters with AmphiSilan-Putzfestiger.

New Coatings of Silicate Finish Render/Plaster:

Prime with Sylitol® NQG-W (facade paint).

Existing Coatings of Silicate Paint and Render/Plaster:

Clean adherent, stable coatings mechanically or with high-pressure water jet, in compliance with the regulations. Remove unsound, weathered coatings by abrading, sanding/grinding or by scraping off. Apply one priming coat of AmphiSilan-Putzfestiger.

Fibre Cement Boards (with or without Asbestos Fibres):

In Germany: Follow BFS Data Sheet No. 14 or TRGS 519 for coatings on asbestos cement boards. Prime in accordance with Technical Information No. 650. Prime free-standing boards on both sides as well as on all edges. Prime new, highly alkaline fibre-cement boards with Disbon 481 EP-Uniprimer to avoid calcareous efflorescence and thin ThermoSan with 10 % of AmphiSilan-Tiefgrund for intermediate coat.

Cement-Bound Wood Chipboards (Particle Boards):

Apply one priming coat of Disbon 481 EP-Uniprimer on highly alkaline boards to prevent calcareous efflorescence. Thin ThermoSan with 10 % of AmphiSilan-Tiefgrund for intermediate coat.

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

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

Sound/Stable Emulsion Paint Coatings:

Clean soiled, chalking coatings by high pressure water jet, in compliance with the regulations. Apply one priming coat of ThermoSan, mixed with 10 % of AmphiSilan-Tiefgrund. If other cleaning methods are used (washing, wire brushing, hosing with water), prime with AmphiSilan-Putzfestiger.

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

Remove completely by suitable means, e.g. mechanically or via paint stripper, followed by surface cleaning with a high pressure water jet, in compliance with the regulations. Apply one priming coat of ThermoSan, mixed with 10 % of AmphiSilan-Tiefgrund. Prime chalking, sanding, absorbent surfaces with AmphiSilan-Putzfestiger.

Unstable Mineral Paint Coatings:

Remove the coating completely to the stable substrate by sanding off, brushing off, scraping off or using high pressure water jet, in compliance with the regulations, or by other suitable means. Allow wet cleaned surfaces to dry well before further treatment. Apply one priming coat of AmphiSilan-Putzfestiger.

Fair Faced Brickwork:

Only fair faced bricks or clinker bricks of frost resistant quality and free of foreign inclusions that leave marks are suitable for paint coatings. Masonry must be dry and free of salts/salty efflorescence, jointing must be free of cracks. Apply one priming coat of AmphiSilan-Putzfestiger. If brownish discolouration occurs in the intermediate coat, recoat with solvent-based facade paint Duparol.

Sand-Lime Brick Masonry:

Only frost resistant fair faced bricks, free of foreign inclusions that leave marks, e.g. sand or loam, are suitable for paint coatings. Jointing must be free of cracks. Clean chalking surfaces. Remove salty efflorescence by dry wire brushing. In Germany: Follow BFS Data Sheet No. 2. Apply one priming coat of AmphiSilan-Tiefgrund.

Surfaces with Salty Efflorescence:

Remove salty efflorescence thoroughly by dry wire brushing and 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 preferably with Histolith-Renovierspachtel and prime repaired areas subsequently. Follow Technical Information.

Method of Application

Apply with paint brush or roller.
For airless application we recommend the use of ThermoSan Nespri-TEC using the Nespri-TEC spraying method.

Surface Coating System

Priming or Intermediate Coat

ThermoSan, diluted to a max. of 10 % with tap (potable) water.
For maintenance coat: In most cases an additional priming coat can be omitted, if max. 10 % of AmphiSilan-Tiefgrund is added.

Finishing Coat (Topcoat):

ThermoSan, diluted to a max. of 5 % with tap water. Minimum drying time between coats: 12 hours.

Consumption

Approx. 150 - 200 ml/m² per coat on smooth substrates. On a roughly textured surface 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 after 2-3 hours and recoatable after 12 hours. Completely cured and ready for stress after approx. 3 days. Lower temperatures and higher humidity extend the drying time.

Tool Cleaning

Clean tools/equipment immediately after use with soap and water.

Note

In Germany: Follow BFS Data Sheet No. 21 for use on ETICS/EWI systems. 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 paint should be applied wet-on-wet and without interruption. Do not apply on horizontal surfaces exposed to rain or moisture. Only intact ETICS/EWI systems can be renovated by paint coatings. For unsound surfaces we refer to the Capatect Renovation System for ETICS/EWI systems. Do not use solvent-based primers on ETICS with polystyrene insulation (EPS); exception: AmphiSilan-Putzfestiger. Luminosity/lightness index (LI) must be > 20 for tinted paint coatings.

ThermoSan contains special algicidal and fungicidal agents to counteract the forming of organic growth (algae & fungi/mildew/mould) on the coating film. The depot of agents offers a prolonged protection, but the algicidal & fungicidal effect is limited by the special facade conditions, e.g. intensity of organic attack/infestation and moisture. Therefore a durable protection cannot be guaranteed. Mechanical loads on matt facade paints in dark colour shades may produce bright-toned stripes as a product specific property (no writing resistance), but the effect is minimised when using ThermoSan.

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.

Copper ions in draining rain water (run-off water) may react with ingredients of ThermoSan and may cause a brownish discolouration. Thus all relevant copper surfaces must be protected against oxidation. Alternatively our product Muresko SilaCryl® can be used.

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

- ThermoSan Wasserdurchlässigkeit (water vapour permeability)
- ThermoSan Pilz- und Algenbefall (fungal and algal attack)
- ThermoSan Wirksamkeit der Filmkonservierung (efficiency of film preservative)

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. Use P2 dust filter for grinding. 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.

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

In Germany: Advice for allergy sufferers with isothiazolinone allergy: German 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: 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).

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 must 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. 20 g/l VOC.

Product Code Paints and Enamels

M-SF01 F (Germany)

Substances of Content - Declaration

Hybrid binder (organic silicate/acrylate), silicone resin, titanium dioxide, silicates, calcium carbonate, mineral fillers, water, film forming agent, additives, preservative (methyl-/benzisothiazolinone), film preservative (octylisothiazolinone, terbutryn, carbendazim, isoproturon).

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

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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. 156 · ThermoSan · Issued: August 2015