



CAPAROL

Technical Information No. 156

156

ThermoSan

**Special silicone resin based coating.
Optimum moisture regulating properties.
Counteracts algae and mildew infestation.**

Product Description

Field of Application:

Due to a newly developed silicone resin / binder combination and a nano-structured pigment-filler combination, soiling tendency is noticeably reduced. ThermoSan is suitable for all mineral and synthetic resin-bound renders/plasters, coated or uncoated. ThermoSan has optimum constructional-physical properties, e.g. excellent protection against rain and a high water-vapour diffusion. ThermoSan is suitable for all kinds of current, sound ETICS/EWI system surface coatings like synthetic resin (organic), silicone resin, silicate-based, and lime-cement renders/plasters.

Properties:

- Water-thinnable, ecologically-compatible, low odour.
- Weatherproof.
- Highly water-repellent.
- Provided with a preservative against deterioration in the coating due to algae and mildew growth (film preservation).
- Alkali-resistant, hence unsaponifiable.
- Highly CO₂ diffusible.
- Non-film-forming, micro-porous.
- Easy to apply.
- Can be used to wash fine cracks in render/plaster surfaces.
- Provided with special pigments, showing a photo-catalysis effect.

Characteristics to DIN EN 1062:

- **Gloss level:** Matt
- **Dry film thickness:** 100 – 200 µm
- **Maximum particle size:** <100 µm
- **Water vapour permeability (s_d-value):** ≥ 0.06 m (high)
- **Water permeability (w-value):** 0.02 [kg/(m² · h^{0.5})] (low)

G₃
E₃
S₁

V₁

W₃



provided with a preservative against deterioration in the coating due to algae and mildew growth

Vehicle:

Combination of silicone resin emulsion and special synthetic dispersion.

Density:

Approx. 1.5 g/cm³

Packaging (Standard Product): 12.5 lit.

ColorExpress: 7.5 lit. and 12.5 lit.

ThermoGrund: 10 lit.

Export Product (WE2 · D-E-P-GB)

Base 1-3: 2.5 lit., 5 lit., 10 lit. and 15 lit.



Colour:

White.

ThermoSan can be tinted with AmphiSilan colourants (full shade toner paints).

Self-tinted material must be prepared in advance and mixed in order to avoid differences of shade.

Quantities of 100 lit. or more in individual shades may be ordered ready-tinted from the factory.

ThermoSan Base 1–3 can be tinted via the ColorExpress machine system in shades of current colour tint cards/collections.

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.

Please Note (Status of October 2006):

Keep out of reach of children. Protect skin and eyes from paint splashes. In case of contact with eyes or skin, rinse immediately with plenty of water. If swallowed, seek medical advice immediately (intestinal flora may be infested). Do not empty into drains, water courses and onto the ground. Only to be applied by brush or roller. Cover the surrounding surfaces while painting. Splashes on enamels, glass, ceramics, metals, natural stones must be washed off immediately. Further information: See Safety Data Sheets.

Storage:

Cool, but frost-free.

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

Product-Code for Paints & Enamels:

M-SF01F ThermoSan
M-GF01 ThermoGrund

Substances of Content - Declaration:

Silicone resin, acrylic resin dispersion, titanium dioxide, calcium carbonate, silicates, water, film forming agent, additives, preservative, film preservative.

Supplementary Material:

ThermoGrund

Special primer for ETICS / EWl systems and special thinner for ThermoSan.

Density: Approx. 1.0 g/cm³

Substances of content: Acrylic resin dispersion, water, film forming agent, additives, preservative.

Application

Pre-Treatment:

Clean surfaces with algae or mildew infestations by water jet, in compliance with the regulations. Then wash the surface with Capatox and allow to dry.

System of Application:

Priming or Intermediate Coat:

ThermoSan thinned max. 10 % with tap (potable) water. By mixing with max. 10 % of ThermoGrund, the additional priming coat can be omitted in the majority of cases.

Finishing Coat (Topcoat):

ThermoSan thinned max. 5 % with tap water. Drying time between coats: 12 hours.

Method of Application:

Apply with brush, roller or airless-roller. ThermoGrund may be applied with suitable airless units.
Spraying angle: 20° to 50°
Nozzle size: 0.015"
Spraying pressure: 60 bar
Clean tools immediately after use with water.

Consumption:

Approx. 150 – 200 ml/m² per coat on smooth substrates, on rough-textured surfaces correspondingly more. Establish the exact rate of consumption by a trial application.

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 and recoatable after 12 hours. Completely dry and ready for stress after approx. 3 days. Lower temperatures and higher relative humidity will lengthen the drying process.

Note:

In Germany: Observe VOB, Part C, DIN 18 363, para. 3.1.10 or BFS Data Sheet No. 21. Avoid application 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 or moisture. Only intact ETICS / EWI systems can be renovated by coating with paint. For unsound surfaces we refer to the Capatec-Renovation System for ETICS / EWI systems. Do not use solvent-based primers on ETICS with polystyrene insulation (exception: Colarol-Putzfestiger). For tinted coatings luminosity must be > 20. ThermoSan contains special algicidal and fungicidal agents to counteract the forming of organic growth (fungi & algae). 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 growth and moisture. A durable protection cannot be guaranteed.

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 growth and moisture. A durable protection cannot be guaranteed.

Thinning of original material with 10% of ThermoGrund is recommended to make repairs of tinted ThermoSan coatings more invisible.

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.

ETICS / EWI Systems

Intact external thermal insulation composite systems with surfaces made of synthetic-resin, silicate-based, silicone resin, lime-cement, or light weight renders/plasters:

Clean renders/plasters by suitable means. While cleaning with high pressure jet, particularly steam-jet, on sound existing synthetic renders the temperature should not exceed 60 °C. Allow to dry after cleaning. Coat normally absorbent, sound renders/plasters directly with ThermoSan, mixed with max. 10 % of ThermoGrund. Prime highly absorbent substrates additionally with ThermoGrund.

Conventional Exterior Surfaces

Render/Plasters

Class P Ic Hydraulic Lime Plaster

Class P II Lime-Cement Mortars

Class P III Cement Mortars:

Allow new renders/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, powdery surfaces and sintered layers. Clean existing renders/plasters mechanically or by using high pressure water-jet in compliance with the regulations.

Priming coat of ThermoSan mixed with 10 % of ThermoGrund. Prime highly absorbent surfaces with ThermoGrund.

Prime critical surfaces that are powdery/chalking and sanding with AmphiSilan-Grundfestiger, if required apply two coats, wet-on-wet.

Fibre-Cement Slabs/Boards (uncoated):

Prime smooth, slightly absorbent slabs with AmphiSilan-Grundierfarbe. Prime weathered, highly absorbent slabs with AmphiSilan-Grundfestiger. Prime free-standing sheets or slabs on both sides as well as on all edges. In Germany: Observe the recommendations of BFS Data Sheet No. 14 for coatings on asbestos cement boards. Prime new, highly alkaline fibre-cement boards with Disbon 481 EP-Uniprimer, to prevent formation of calcareous efflorescence.

Fibre-Cement Slabs/Boards with Silicate-Based Coating, e.g. Glasal Boards:

Check for adhesion and prime with Disbon 481 EP-Uniprimer. In Germany: Observe the recommendations of BFS Data Sheet No. 14 for coatings on asbestos cement boards.

Silicate Paints & Renders/Plasters:

Clean sound, adherent coatings mechanically or by using high pressure water-jet, in compliance with the regulations. Remove unsound, weathered coatings by scraping, rubbing or peeling off. Prime with AmphiSilan-Grundfestiger.

Sound Dispersion Paint Coatings:

Roughen slightly glossy surfaces. Clean dirty, chalking coats by high pressure water-jet, in compliance with the regulations. Priming coat with ThermoSan, mixed with 10 % of ThermoGrund.

Unsound Enamels, Dispersion Paints or Synthetic Resin-Bound Renders/Plasters:

Remove completely by using suitable means, e.g. mechanically or by stripping and then re-cleaning with high pressure steam-jet, in compliance with the regulations. Prime with ThermoSan, mixed with 10 % of ThermoGrund. Prime chalking, sanding, absorbent surfaces with AmphiSilan-Grundfestiger.

Facing Brick Masonry:

Only frost resistant bricks, free of foreign inclusions, are suitable for coating. Masonry must be dry and free of salty deposits, jointing must be free of cracks. Prime with AmphiSilan-Grundfestiger. If brownish discolouration occur after intermediate coating with ThermoSan, apply a finishing coat with Duparol.

Sandlime Brick Masonry:

Only frost resistant bricks, free of foreign inclusions, e.g. sand or loam, are suitable for coating. Joining must be free of cracks. Clean dusty surfaces. Dry-brush salty efflorescence. Observe the recommendations of BFS Data Sheet No. 2. Priming coat with ThermoGrund.

Surfaces with Salty Efflorescence:

Remove salty efflorescence by dry-brushing. Prime with AmphiSilan-Grundfestiger. For surfaces with salty efflorescence, the durability of coatings and non-recurrence of efflorescence cannot be guaranteed. For large-scale rehabilitation measures apply a suitable restoration render/plaster system.

Defects:


Repair small defects with Caparol Fassaden-Feinspachtel. Deeper damages up to 20 mm should be repaired with Capalith-Fassadenspachtel P. Prime the repaired areas. Observe the recommendations of 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.

Customer Service Center:

 (+49) 06154 / 711710
Fax No.: (+49) 0 6154 / 711711
e-mail: kundenservicecenter@caparol.de

Technical Information No. 156 - Issue: October 2006

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/appliator 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. 156 ThermoSan, 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