

CoolProtect

Façade paint for optimum solar reflection of dark colors on external thermal insulation composite systems and highly insulating mineral substrates



Product Description

Field of Application	<p>Special coating for reducing thermal heating on highly thermally insulated substrates such as ETICS based on polystyrene and mineral wool facade insulation boards, aerated concrete, thermal insulation plasters, etc.</p> <p>The special composition of the pigmentation allows less heating up when exposed to sunlight, since in addition to part of the visible sunlight, a large part of the near infrared range (NIR) is also reflected.</p>
Material Properties	<ul style="list-style-type: none"> ■ Low heating during solar radiation ■ Versatile use ■ Protected against algae and fungal attack ■ Good water vapor diffusion ■ Alkali-resistant, therefore unsaponifiable ■ Very good adhesion to the most common façade surfaces
Material Base / Vehicle	Silanized pure acrylate based on SilaCryl® binder with silicone coating
Packaging/Package Size	<ul style="list-style-type: none"> ■ Special tone: 12,5 l
Colours	<p>CoolProtect is supplied factory tinted in the desired dark shade. If >100 liters are purchased in one color & order, a factory tint is available. In order to detect possible tinting errors, please check for color shade exactness before processing.</p> <p>In case of conspicuities or deviations from the delivery target (e.g. color deviations) or from the usual quality, please also observe the guidelines on inspection obligations for the delivery of tinting products of the "Bundesverbandes Farbe Gestaltung Bautenschutz".</p> <p>Only use color shades of one production (batch) on continuous surfaces. Brilliant, intensive color shades may have a lower hiding power. It is therefore advisable to apply a comparable, opaque, white-based, pastel shade before using these color shades. A second top coat may be necessary.</p> <p>Color fastness according to german "BFS*-Merkblatt Nr. 26": Class: A (binder) Group: 1-3, depending on color shade (pigmentation)</p> <p>*Bundesausschuss Farbe und Sachwertschutz (German committee dealing with paint and protection of properties)</p>
Gloss Level	Matt, G ₃



Storage
Technical Data

Please store in a cool place and keep containers tightly closed.

Characteristics according to DIN EN 1062:

- Density: approx. 1,5 g/cm³
- Maximum grit size: < 100 µm, Class: S₁
- Dry film thickness: 100–200 µm, Class: E₃
- Water permeability (w-value): ≤ approx. 0,05 kg/(m²· h^{0,5}), Class: W₃ (low)
- Water vapour permeability (sd-value): s_d-Value: < ca. 0,5 m, Class: V₂ (medium)
Deviations in the technical characteristics are possible due to tinting.

Supplementary Product

"OptiSilan TiefGrund", "CapaSol RapidGrund", "CapaSol Konzentrat" or "FungiGrund"

"Caparol Trocknungsbeschleuniger" (Caparol Drying Accelerator): Winter additive for processing and early rain resistance of CoolProtect at low temperatures from +1 °C to approx. +10 °C. Processing, see label of "Caparol Trocknungsbeschleuniger".

Note

Dark color shades on intact ETICS:

Color shades with a light reference value (LRV/ german: HBW) < 20 must have a TSR value of ≥ 25 % (this is given for CoolProtect color shades with a light reference value of ≥ 10) according to the leaflet "Total Solar Reflectance" of the "Verband für Dämmsysteme, Putz und Mörtel e.V." (Association for Insulation Systems, Plaster and Mortar). The TSR value of the desired color shade can be requested. In case of brightness value < 10 % on ETICS, technical advice must be obtained from Caparol field service.

AAC wall elements (wall panels) with intact AAC coating:

A brightness value ≥ 20 % or a TSR value of ≥ 30 % must be observed.

Suitability according to
Technical Information No. 606
Definition of Application Areas

Interior 1	Interior 2	Interior 3	Exterior 1	Exterior 2
–	–	–	+	+
(–) not suitable / (○) conditionally suitable / (+) suitable				

Application

Suitable Substrates

The substrates must be dry, free from dirt and substances that may prevent good adhesion. In Germany observe VOB, Part C, DIN 18363, Para. 3. For substrate pre-treatment, please also observe our Technical Information No. 650 "substrates and their pre-treatment".

Substrate Preparation

New and existing, sound/ stable external thermal insulation composite systems with surfaces of synthetic resin render, silicone resin render, lime-cement rendering / solid mortar according to DIN EN 998-1 type CS II 1.5 - 5.0 N/ mm²:

Wet-clean old render using suitable method. When cleaning, use pressure water jets with a max. temperature of 60 °C and a pressure of max. 60 bar. After cleaning, allow sufficient drying time. Coat with Muresko according to the existing finishing render in accordance with the following substrate specifications.

Finishing renders according to DIN EN 998-1 class CS II, 1.5 - 5.0 N/mm²:

New renders can be coated after sufficient standing time, usually after 2 weeks, at approx. 20 °C and 65 % relative humidity. In unfavorable weather conditions, e.g. influenced by wind or rain, significantly longer standing times must be observed. An additional priming coat of CapaGrund Universal reduces the risk of lime efflorescence on alkaline finishing renders, so that coating can be applied after a standing time of only 7 days.

Old renders:

Renewed renders must be well set and dried. On coarsely porous, absorbent, slightly sanding renders, prime with OptiSilan TiefGrund. On heavily sanding, chalking renders, apply one priming coat of Dupa-Putzfestiger.

New silicate finishing renders:

Coat with products from our silicate Sylitol® program.

Old silicate paints and renders:

Clean firmly adhering coatings mechanically or by pressure water jetting, observing the legal regulations. Remove non-sticking, weathered coatings by scraping, grinding, scraping off. Apply one priming coat of Dupa-Putzfestiger.

Aerated concrete with sound old coating:

Clean intact surfaces. Apply one priming coat of CapaGrund Universal. For non-intact aerated concrete coatings, refer to the Caparol Building Protection Program.

Concrete:

Concrete surfaces with dirt deposits or floury grain layer are to be cleaned mechanically or by pressure water jetting, observing the legal regulations. Apply one priming coat of "CapaGrund Universal" on slightly absorbent or smooth surfaces. Prime coarsely porous, slightly sanding or absorbent surfaces with e.g. "OptiSilan TiefGrund". On chalky surfaces prime with "Dupa-Putzfestiger".

Cement-bonded wood particle boards:

Due to the high alkalinity of cement-bonded wood particle boards, a priming coat with Disbon 481 EP-Uniprimer must be applied to avoid lime efflorescence.

Facing brickwork:

Only frost-resistant facing bricks or clinker without foreign inclusions are suitable for painting. The masonry must have crack-free joints, be dry and free of salt.

Apply one priming coat of "Dupa-Putzfestiger". If brown discoloration appears in the intermediate coat, continue with "Duparol" water-free facade paint.

Sound dispersion, dispersion-silicate or silicone resin paint coatings:

Clean old coatings by pressure water jetting in compliance with legal regulations. Observe substrate test according to "BFS Merkblatt No.20".

Old coating with the following properties:

Weakly absorbent, solid, dry, load-bearing: see coating build-up.

Medium absorbency: "CapaGrund Universal" diluted to max. 3% water.

Highly absorbent: "OptiSilan TiefGrund" or "Dupa-Putzfestiger".

Old coatings on ETICS: Highly absorbent, firmly adhering, fine hairline cracks: "Dupa-Putzfestiger".

Chalking or chalking (also under water load following "BFS* Merkblatt No. 20", B.13

„Oberflächenfestigkeit, Kreidung" (Surface strength, chalking):
Prime coat with "Dupa-Putzfestiger".

Glossy and water repellent (hydrophobic) surfaces:

Mechanically roughen. Prime with "Capagrund Universal". If water beading is still present after mechanical roughening, we recommend priming with "Dupa-Haftgrund".

Load-bearing synthetic resin or silicone resin plaster coatings:

Clean old renders with a suitable method. In the case of wet cleaning, allow the surfaces to dry thoroughly before further treatment.

Non-bearing, mineral coatings:

Remove completely by sanding, brushing, scraping, pressure water jetting in compliance with legal regulations or other suitable measures. In case of wet cleaning, allow surfaces to dry thoroughly before further treatment. Prime with "Dupa-Putzfestiger".

Non-supporting dispersion paint or synthetic resin plaster coatings:

Remove residues by suitable method, e.g. mechanically or by stripping and subsequent cleaning by pressure water jetting, observing the legal regulations. Prime weakly absorbent or smooth surfaces with "CapaGrund Universal". On chalky, sanding, absorbent surfaces, apply one priming coat of "Dupa-Putzfestiger".

Surfaces soiled by industrial fumes or soot: Coat with "Duparol" water-free facade paint.

Cracked render or concrete surfaces: Depending on the crack class, coat with Cap-elast-System, FibroSil or PermaSilan.

Surfaces with salt efflorescence:

Remove salt efflorescence dry by brushing. Apply one priming coat of "Dupa-Putzfestiger". When coating surfaces with salt efflorescence, no guarantee can be given for the permanent adhesion of the coating or the elimination of the salt efflorescence.

Defects:

Repair small defects with "Caparol Fassaden-Feinspachtel". Large defects up to 20 mm should preferably be repaired with "Histolith-Renovierspachtel". Repriming of filler areas.

*Bundesausschuss Farbe und Sachwertschutz
(German committee dealing with paint and protection of properties)

Method of Application

Processing is done with brush, roller or airless application.

Surface Coating System

Remove fungal or algal coatings by wet blasting in compliance with the legal regulations. Wash surfaces with Capatox or FungiGrund and allow to dry thoroughly.

Prime or intermediate coat:

CoolProtect diluted with max. 10 % water.

Final coat:

CoolProtect diluted with a maximum of 5 % water.

To maintain the structure of roughcast surfaces, dilute the primer coat with max. 15-20 % and the top coat with max. 10 % water.

Consumption

Approx. 200 ml/m² per coat on smooth surfaces.
On rough surfaces, the exact consumption must be determined by trial coating.

To achieve the best possible protection against algae and fungal attack, it is necessary to apply two coats with a total of at least 400 ml/m² to achieve an average coating thickness of at least 200 µm. Each additional coat, at a consumption of at least 200 ml/m² per coat, increases the film thickness by a further approx. 100 µm.

On rough surfaces, the consumption is correspondingly higher.

Application Conditions

Lower temperature limit during processing and drying:

Material, circulating air and substrate temperature: min. + 5° C to max. + 30° C.

Drying/Drying Time

Surface dry and recoatable after 4 - 6 hours at +20 °C and 65 % relative humidity. Fully dry and loadable after approx. 3 days.

These times are longer at lower temperatures and higher humidity.

Tool Cleaning

Clean tools with water after use.

Note

To avoid laps, coat wet-on-wet in one go. Not suitable for horizontal surfaces exposed to water.

There is an increased risk of fungus and algae formation on facade surfaces that are exposed to higher than usual moisture loads under special object conditions or due to natural weather influences.

CoolProtect is equipped with a film protection. This film protection provides the material with long-lasting, time-limited protection against infestation, the effectiveness of which depends on object conditions, such as the severity of the infestation and the moisture load. Therefore, permanent prevention of algae and fungal infestation is not possible. "FungiGrund" can be used as a substrate pretreatment for surfaces affected by algae and fungi after cleaning.

In the case of dark color shades, mechanical stress may result in light streaks (writing effect). This is a product-specific property of all matt facade paints.

In the case of low-permeable, cool substrates or in the case of drying delays due to weather conditions, auxiliary substances may form yellowish/transparent, slightly glossy and sticky run-off marks on the surface of the coating due to exposure to moisture (rain, dew, fog). These auxiliary substances are water-soluble and are removed independently with sufficient water, e.g. after several heavy rains. The quality of the dried coating is not adversely affected by this. If, nevertheless, a direct recoating is to be carried out, the runners/auxiliary materials must be pre-wetted and washed off completely after a short exposure time. An additional priming coat of "CapaGrund Universal" must be applied. If the coating is applied under suitable climatic conditions, these run-off marks will not occur.

Markings of repairs/ touch-ups in the surface depend on many factors and are therefore unavoidable (BFS* Merkblatt No. 25).

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Advice

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

May cause allergic skin reactions. Harmful to aquatic life with long lasting effects. If medical advice is needed, have packaging or label at hand. Keep out of the reach of children. Do not get in eyes, on skin or on clothing. Avoid release to the environment. Wear protective gloves/eye protection. IF ON SKIN: Wash with plenty of soap and water. Contains: Octhilineone (ISO), 1,2-benzisothiazol-3(2H)-one, 2-methyl-2H-isothiazol-3-one, reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1), Caution! Spraying may produce hazardous respirable droplets. Do not inhale aerosol or mist. This product is a "treated product" according to EU Regulation 528/2012 (not a biocidal product) and contains the following biocidal active ingredients: octhilineone (ISO) (CAS No. 26530-20-1), terbutryn (CAS No. 886-50-0). Hotline for allergy inquiries: 0800/1895000 (free of charge from German landlines). Disposal: Dispose of liquid material residues at the collection point for old paints/lacquers, dispose of dried material residues as construction and demolition waste or as municipal or household waste.

Disposal

Materials and all related packaging must be disposed of in a safe way in accordance with the full requirements of the local authorities. Observe the relevant national regulations.

In Germany: Dispose of liquid material residues at the collection point for old paints/lacquers, dispose of dried material residues as construction and demolition waste or as municipal or household waste.

EU limit value for the VOC content

(Cat. A/c): 40 g/l (2010). This product contains max. 40 g/l VOC.

Product Code Paints and Enamels

BSW50

Substances of Content - Declaration

Polyacrylate resin, polysiloxanes, silicates, calcium carbonate, titanium dioxide, mineral pigments / fillers, water, glycol ether, additives, preservatives, film protectants.

TECHNICAL INFORMATION NO. 210

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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.210 · CoolProtect · Issued: June 2022

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