

Sabeto Shield Coating



Fast-drying water-based aliphatic polyurethane waterproofing coating for roofs, with resistance to early rain and to extremely low temperatures

Description

Fast-drying, one-component water-based aliphatic polyurethane waterproofing coating for roofs, with high resistance to early rain and to extremely low temperatures down to -30°C.

Dries very quickly, allowing recoating in just 3 hours and facilitating the full completion of the waterproofing system within one day.

Demonstrates resistance to early rain just 1 hour after application. Forms an impermeable to moisture membrane, with high resistance to UV radiation and mechanical stress.



Packing

13kg

Colors

WHITE

RAL 7040

Fields of application

- Exposed roofs made of concrete, cement tiles, cementitious screeds
- Walkable roofs where high resistance to ponding water is required
- Metallic surfaces
- On top of new or old waterproofing coatings
- Over PU foam insulation for its protection
- On top of mineral-surfaced bitumen membranes

*The above surfaces require appropriate preparation and priming prior to the application of **Sabeto Shield Coating***

Properties - Advantages

- Quick application: Touch dry in 2 hours – Dry to recoat in 3 hours, facilitating the full completion of the waterproofing system within one day
- Resistance to early rain in just 1 hour after application
- High elongation and mechanical strength
- Excellent resistance to ponding water
- Certified cool roofing properties (for the white color shade)
- Ideal waterproofing solution for walkable roofs
- Long-lasting resistance to UV radiation & adverse weather conditions
- No signs of blisters or craters on the surface, during the curing phase
- May also be applied on damp surfaces (not fully wet)
- Increased hardness and crack-bridging properties
- Eco-friendly & user-friendly (water-based, one-component)
- Long service life secured

Certificates – Test reports

- CE Certification acc. to EN 1504-2
Certificate of Conformity No. 1922-CPR-0386
- Certified cool roofing material*
- Test report by the external independent quality control laboratory Geoterra (No. 2023-702_2)
- Fulfils the requirement LEED v4.1: SS Credit – Heat Island Reduction - Option 1 –High Reflectance Roof, Initial SRI ≥ 82
- Complies with the V.O.C. content requirements acc. to the E.U. Directive 2004/42/CE



* Certifications and supporting documentation are available upon request.

Technical characteristics

Density (EN ISO 2811-1)	1,40kg/L ($\pm 0,1$)
Elongation at break (ASTM D412)	250% (± 30)
Tensile strength at break (ASTM D412)	2MPa ($\pm 0,30$)
Tensile strength at break (reinforced ASTM D412)	>3MPa
Adhesion strength (EN 1542)	>2N/mm ²
Hardness Shore A (ASTM D2240)	65
Liquid water permeability (EN 1062-3)	<0,1kg/m ² h ^{0,5}
Permeability to CO ₂ – Diffusion-equivalent air-layer thickness Sd (EN 1062-6)	>50m
Water vapor permeability – Diffusion-equivalent air-layer thickness Sd (EN ISO 7783)	>5m (Class II)
Accelerated UV ageing in the presence of moisture (UVB-313, 4h UV @60°C + 4h condensation @50°C, ASTM G154)	Pass (>1000 hours)
Service temperature	-30°C min. / +80°C max.
Total Reflectance SR% (ASTM C1549)	84% (white)
Infrared Emittance (ASTM E408)	0,96 (white)
Solar Reflectance Index SRI (ASTM E1980-11)	107 (white)
Consumption: 1-1,2kg/m² for two layers (cementitious surface)	

Application conditions

Substrate moisture content	<6%
Relative air humidity (RH)	<80%
Application temperature (ambient - substrate)	+5°C min. / +40°C max.

Curing details

Drying time (RH 50%)	+10°C	180-200 minutes
	+23°C	100-120 minutes
	+35°C	45-60 minutes
Dry to recoat (RH 50%)	+10°C	5 hours
	+23°C	3 hours
	+35°C	2 hour
Resistance to early rain (RH 50%)	+10°C	1,5 hour
	+23°C	1 hour
Resistance to early rain (RH 70%)	+40°C	1,5 hour
Full hardening		~ 7 days
* Low temperatures and high humidity during application and/or curing prolong the above times, while high temperatures reduce them		
**The above times for drying, recoating and early rain resistance refer to layer application of avg. consumption 600gr/m ²		

Appropriate primers on usual substrates

Substrate	Primer	Description - Details
Concrete, cement screed	Sabeto Shield Primer	Hybrid, water-based, fast-drying micro-structured primer
Metal (iron, steel)	Sabeto Shield Metal Primer	Water-based, one-component anti-corrosive primer, with excellent adhesion on old or new metal surfaces
Inox, galvanized steel, aluminium	Sabeto Shield Inox Primer	One-component water-based primer, with high adhesion strength on glossy non-porous substrates

Instructions for use

Substrate preparation

The surface must be stable, clean, sufficiently dry, protected from rising moisture and free of dust, oil, grease and loose materials. Any poorly adhering materials and older coatings should be removed, and the surface should be thoroughly cleaned mechanically or chemically. Depending on the substrate, appropriate mechanical preparation may be required, to smooth the irregularities, open the pores and create the optimum conditions for adhesion. The surfaces should have the appropriate slopes, and they should be sufficiently flat, smooth, and continuous (i.e., without holes, cracks, bays, etc.). In the opposite case, they should be treated accordingly (e.g. by proper puttying).

Priming

Prior to the application of **Sabeto Shield Coating**, the proper **Sabeto Shield Primer** should be applied, depending on the substrate (see table). In the case of cementitious substrates, it is proposed to apply the hybrid, water-based primer **Sabeto Shield Primer**.

Application

Following the priming of the surface, **Sabeto Shield Coating** is applied, after thorough stirring, in at least two layers by roller, brush or airless spray. The first layer is diluted up to 5% with clean water, while the second layer (and every subsequent one) is applied undiluted, in a vertical or different direction than the previous one.

Special notes

- Substrate temperature during application and curing must be at least 3°C above dew point to avoid condensation issues.
- **Sabeto Shield Coating** should not be applied under extremely wet conditions (i.e. out of specification) or if rainy weather is expected immediately after application.
- The application is continued sufficiently in the vertical surfaces of the roof (min. 30cm), in order to form a uniform waterproofing membrane. It is recommended in any case to cover the upstands entirely and to continue the waterproofing application in their horizontal sections.
- The durability of the waterproofing system is enhanced by the increase of the total dry film thickness, which may be achieved through the application of an additional layer or layers.
- In areas with an increased likelihood of stagnant water remaining for an extended period of time, **Sabeto Shield Coating** is recommended to be reinforced with a polyester fabric. In such case at least 3 coats of **Sabeto Shield Coating** are required locally. In any case though, it is deemed necessary that appropriate slopes are created in advance to facilitate the smooth flow of water away from the roof.
- In case of new cement screed and soon after its laying, it is recommended to create suitable joints (per 15-20m² of surface area and at a depth approximately equal to $\frac{3}{4}$ of the thickness of the cement screed), which shall then be properly sealed after proper priming of their sides. It is also necessary to create expansion joints around the perimeter, as above, and with a minimum width of 1cm. Any existing joints of the concrete slab should be transferred to the new substrate.

Maintenance instructions

- The full hardening of the film occurs app. 7 days after the application of the final layer, depending also on the atmospheric conditions. During this period, it is advisable that the access to the application area is prohibited or limited only to specialized personnel.
- It is recommended to annually inspect the coating for any damage caused by accidental impact or misuse
- In case of need for local repairs, **Sabeto Shield Coating** is re-applied in its original dry film thickness at the minimum, after cleaning and priming (if necessary) the affected area.
- Periodic cleaning by water-jetting is advisable (combined with a neutral washing agent, if needed), especially in case of heavy accumulation of dirt, dust and pollutants on the surface.

Appearance	Viscous liquid
Colors	White, Grey RAL 7040 Also available other shades upon request
Packing	13kg in plastic pails
Cleaning of tools – Stains removal	By water immediately after application. In case of hardened stains, by mechanical means
Volatile organic compounds (V.O.C.)	V.O.C. limit acc. to the E.U. Directive 2004/42/CE for this product of category AcWB: 40g/l (Limit 1.1.2010) - V.O.C. content of the ready-to-use product <40g/l
UFI code	NGT0-NOPD-V009-HJ0D
Version	Sabeto Shield Coating , fast-drying water-based aliphatic polyurethane waterproofing coating
Storage stability	2 years, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight

	
SabetoFLEX ApS Hesthøjvej 13 DK 7870, Roslev 24	
DoP No.: 4951-15 EN 1504-2 Sabeto Shield Coating Surface protection products Coating	
Water vapour permeability	Class II
Adhesion strength	$\geq 1.5 \text{ N/mm}^2$
Capillary absorption and permeability to water	$W < 0.1 \text{ Kg/m}^2 \text{ h}^{0.5}$
Permeability to CO_2	$S_D > 50 \text{ m}$
Reaction to fire	Euroclass F
Dangerous substances	Complies with 5.3

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