Reflect

White protective paint with high SRI

Technical specifications

Reflect is a white, solvent-free paint that is easy to apply. It is pigmented with titanium dioxide, based on water-based polymer emulsions, special additives, and inert fillers. Once dry, it forms a flexible, weather-resistant film that protects against UV rays. The product is suitable for the protection of bitumen-polymer membranes. The white finish and the special additives in the formula not only extend the life of the roofing membranes but also reduce the temperature both on the outer surface and inside the building. The product lowers the surface temperature of roofs exposed to the sun, increases savings on summer air conditioning costs due to its thermal insulation properties, reduces urban heat islands, and extends the life of bituminous waterproofing membranes.

Reflect meets Annex 1 of Legislative Decree 26/06/2015 and the criteria of environmental protocols for sustainable construction (CAM PANGPP, ITACA Protocol, LEED Protocol).

Reflect maintains the temperature of the waterproofing membrane around 40°C while simultaneously increasing reflected light, which adds to the direct radiation captured, significantly improving the energy performance of photovoltaic solar panels. It is estimated that the efficiency increase of photovoltaic panels is in the range of 4-10%.

Reflect can be applied not only on bituminous membranes but also on plasters, concrete, sheet metal roofs, tiles, and bitumen-coated corrugated sheets.

Instructions for use

Reflect is ready to use.

Stir before application to ensure uniformity.

Clean the surfaces to be treated: they must be dry, uniform, and solid.

Make sure to remove dust, any loose or crumbling parts, release agents and paints.

Clean the surfaces to be treated thoroughly: they must be dry, uniform, and solid.

Ensure that dust, any friable parts, mold release agents, paint, and rust are removed.

The surfaces to be treated must be completely dry.

On new, talc-treated, and sanded membranes, wait for the bitumen-polymer membranes to reach the appropriate seasoning.

Avoid application in adverse weather conditions that could negatively affect proper application, spreading, and drying of the product: imminent rain, dew, fog, or frost could wash away or prevent Reflect from adhering properly to the treated surface. Ensure that the waterproofing is designed for regular rainwater drainage.

Apply at temperatures between +5°C and +30°C, avoiding extreme hot and cold conditions during application, spreading, and drying of the film. Optimal conditions must be maintained for at least 24 hours before and after application.

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Application

Apply with a brush, roller, broom, or spray.

Apply the first coat after dilution with water (about 10%); the second coat should be applied undiluted when the surface is completely dry (not before 6 hours). The dilution will depend on the type of support and environmental conditions.

Two coats are always recommended, preferably crossed. To maintain high solar reflectance and efficiency, periodic maintenance of the surfaces is recommended, including visual inspection and cleaning with high-pressure water. If the surfaces are particularly porous or crumbly, apply the **Isolmur** primer according to the instructions in the technical data sheet.

Consumption

The consumption of **Reflect** on aged surfaces is approximately 200-300 g/m² per coat.

On slate membranes, consumption is approximately 350-450 g/m² per coat.

Warnings

Do not apply on flat surfaces with prolonged water stagnation.

Surfaces must have a minimum slope to allow for rainwater drainage.

Do not apply on wet or damp surfaces.

Do not use on tanks, basements, or channels subject to strong water pressure or hydrostatic pressure.

In applications on concrete, remove cracks and cavities.

Do not use on surfaces or containers that hold food, drinking water, or that may come into contact with solvents or mineral oils.

Keep containers closed before use.

Apply at temperatures between +5°C and +30°C. Extreme hot and cold conditions should be avoided during application.

Do not apply when the temperature could drop below +5°C during the drying process of the paint film.

Do not apply on very hot surfaces, as this would excessively speed up the film-forming process, leading to negative effects on cohesion and adhesion.

Do not apply with high humidity or when rain is imminent during the drying of the film.

The product is not walkable, and can only be walked on for periodic maintenance.

It is frost-sensitive, so store at temperatures above +5°C.

Newly applied bituminous surfaces generally have surface hydrocarbon exudations, which can make perfect adhesion of the coating film problematic. It is recommended to apply the product on the membranes only after 6 months of installation, a period usually sufficient to eliminate these exudations. However, simple waiting may not always be enough, and a preventive evaluation of the surface is recommended through empirical tests with adhesive tape to assess the amount of dirt and adhesion.

The product applied to bitumen-polymer membranes on insulating packages may form micro-cracks over time. However, this will not affect waterproofing.
After use, clean tools with water, and if the product has dried, it can be removed with turpentine or hot water.
Use the product according to good safety and work practices, avoiding dispersing material or packaging in the environment.
Refer to the safety data sheet for detailed information.
Shelf life: 12 months in unopened original containers.
Always conduct a preliminary test before use.
Handle in accordance with standard safety and industrial hygiene practices. Prevent release of the material or its packaging into the environment.
Refer to the Material Safety Data Sheet (MSDS) for detailed handling and safety instructions.
Additional information is provided at the end of this document.

Packaging

Buckets 5L
Buckets 15L

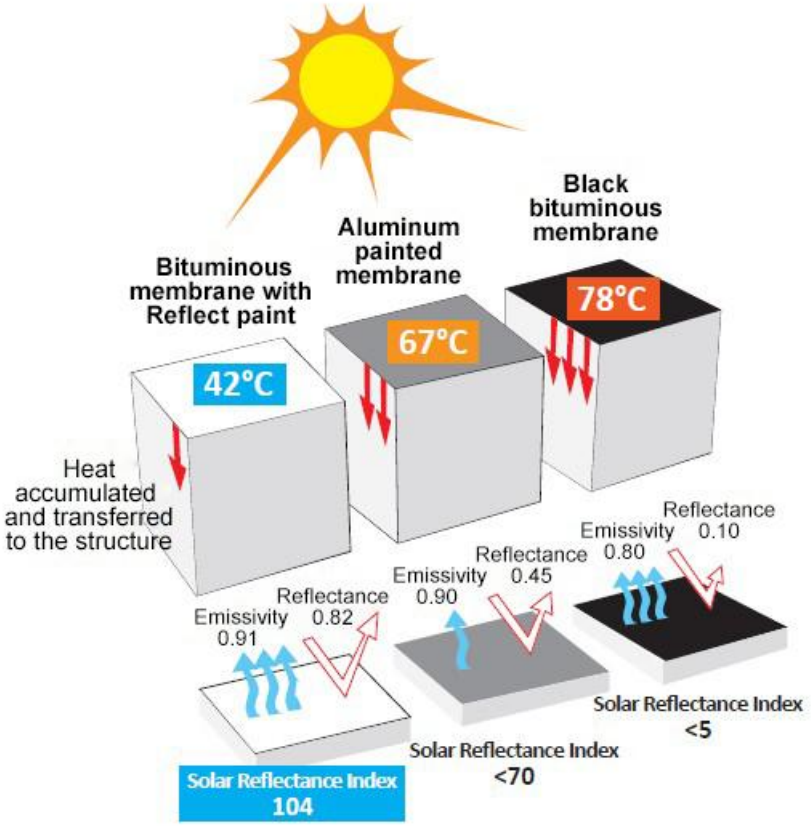
CHEMICAL AND PHYSICAL PROPERTIES

Physical state		Viscous liquid
Colour		White
Smell		Characteristic
Brookfield Viscosity (T=20°C, spindle 6, 10 rpm)	UNI EN ISO 3219	[15.000±3.000]cP
Density (T=20°C)	UNI EN ISO 2811-1	[1,30±0,04]Kg/L
Dry residue (T=130°C)	UNI EN ISO 3251	52-58%
Application thickness (two coats)		0.2÷0.4 mm
Dust-dry time		1÷2 hours*
Dry-to-touch time		2÷4 hours*
Second coat application time		minimum 6 hours*
Full drying time		12÷24 hours*

*Values recorded at T=20°C and 65% relative humidity. Results may vary depending on the thickness or amount of product applied, as well as site-specific boundary conditions such as temperature, humidity, ventilation, and substrate absorption.

Performance characteristics

Class and type	UNI EN 1504-2	C PI-MC-IR
Water vapor permeability	UNI EN 7783	Class I (S_D<5m)
CO_2 permeability	UNI EN 1062-6	S_D >50 m
Solar reflectance	ASTM E-903	0,82
SRI (Solar Reflectance Index)		104
Direct tensile adhesion	UNI EN 1542	≥1N/mm^2
Water absorption by capillarity	UNI EN 1062-3	w<0,1Kg/m^2·h^{0,5}
Infrared emissivity	ASTM C-1371	0,91
Exposure to artificial aging (QUV Test)	EOTA TR 010	No evident changes
Thermal resistance - Operating temperature		[–30°C ÷ +90]°C



Reflectance of Different Membrane Types

Black bituminous membrane	≤0,10
Gray slate membrane	0,40-0,45
Bituminous membrane with **Reflect** paint	>0,80

Maximum Temperature Reached*

Black bituminous membrane	78°C
Gray slate membrane	74°C
White slate membrane	70°C
Aluminum painted membrane	67°C
Self-protected copper sheet membrane	60°C
Self-protected aluminum sheet membrane	55°C
Bituminous membrane with **Reflect** paint	42°C

The effectiveness of the **Reflect surface treatment is evidenced by temperature measurements in July under various bituminous surfaces with different types of protection.*

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