



INDECOLOR

WATER-BASED PROTECTIVE AND DECORATIVE PAINT FOR BITUMINOUS WATERPROOF COVERINGS

INDECOLOR COOL REFLEX

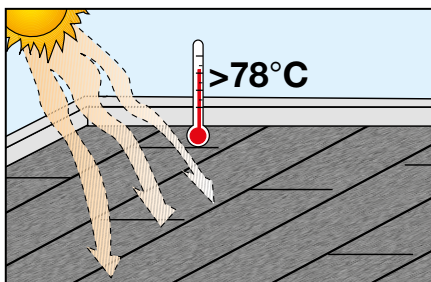
WATER-BASED PROTECTIVE, DECORATIVE AND REFLECTIVE PAINT WITH HIGH SOLAR REFLECTIVITY FOR BITUMINOUS WATERPROOF COVERINGS

GRANTS *LEED* CREDITS

CHARACTERISTICS		ENVIRONMENTAL	METHOD OF USE				PRECAUTIONS
ONE-COMPONENT	WATER BASED	ECO GREEN	MIX MECHANICALLY	SPRAY APPLICATION	APPLY BY BRUSH	APPLY BY ROLLER	STORAGE: KEEP AWAY FROM FROST

PROBLEM

PROTECTING BITUMINOUS COVERINGS FROM UV RAYS AND IMPROVING THE THERMAL INSULATION OF BUILDINGS



Protecting the waterproofing consisting of bituminous coverings or bitumen polymer membrane. Over 90% of roofs are dark-coloured, and the surface of the roof exposed to solar radiation reaches temperatures of around 80°C, which also has negative effects on the useful life of waterproof coverings.

SURFACE FINISH MAX. TEMP.

Grey slate-coated membrane	72°C
Membrane painted with INDECOLOR GREY (RAL 7004)	67°C
Membrane painted with INDECOLOR COOL REFLEX GREY (RAL 7004)	56°C
Membrane painted with INDECOLOR COOL REFLEX WHITE	48°C

SOLUTION

INDECOLOR is a one-part paint based on resins in aqueous dispersion. After drying, INDECOLOR forms a strong, elastic film that adheres perfectly to bitumen polymer membranes.

INDECOLOR COOL REFLEX is a one-part water-based protective coloured paint for waterproof bituminous membranes, which, besides having excellent adhesion, features high reflectivity to sunlight and high emissivity in the infrared band.

APPLICATION FIELDS

INDECOLOR is indicated for protecting bitumen polymer membranes treated with talc, sand or slate chippings, hot-laid bituminous waterproof coverings with oxidized bitumen and cold-laid coverings with stabilized bituminous emulsions.

INDECOLOR COOL REFLEX contains special additives which make it possible to noticeably reduce the temperature both on the surface and inside the building, compared with INDECOLOR and normal coloured paints (see table),

REFLECTANCE	
Black bituminous membrane	<0.10
Painted aluminium membrane	0.40-0.45
Bituminous membrane with INDECOLOR COOL REFLEX	0.40-0.45
with INDECOLOR COOL REFLEX white	0.72
EMISSIONITY	
Black bituminous membrane	>0.80
Painted aluminium membrane	<0.60
Bituminous membrane with INDECOLOR COOL REFLEX	>0.80
with INDECOLOR COOL REFLEX white	0.90

resulting in a considerable energy saving for the building's air conditioning system. The high reflectivity noticeably reduces the heat absorbed from the sun's rays, compared with a dark surface, resulting in a significant temperature reduction and therefore a considerable energy saving for the building's air conditioning system. The high emissivity also favours the dissipation of heat accumulated during the night. The temperatures achieved are also comparable with those associated with the aluminium-based paint commonly used for decorating bituminous coverings. Furthermore, when applied to slated membranes, it protects and fixes the chippings to the surface of the membranes, preventing separation and increasing durability.

SOLAR REFLECTANCE INDEX INDECOLOR COOL REFLEX

colour WHITE SRI 89

colour GREY SRI 51

other colours SRI ≥ 29

ADVANTAGES

- Effectively protects bitumen polymer membranes from UV rays.
- Good adhesion and elasticity.
- The liquid product is non-toxic and non-flammable.
- Easy to apply.
- INDECOLOR COOL REFLEX reduces the surface temperature, thus improving thermal insulation and energy saving.
- INDECOLOR COOL REFLEX qualifies for obtaining LEED credits for heat island reduction and increases the efficiency of solar panels.

METHOD OF USE

• PREPARING THE SUPPORT

Surfaces must be clean, dry and free from impurities or old paint. They must also be washed with water to remove the water-soluble reddish dust and any loose talc residues (1). For new, talced and sanded membranes, it is essential to prime the surface with PREPAINT, as indicated in its technical data sheet. PREPAINT is a fixer and insulator which allows unseasoned bitumen polymer membranes to be coated.

• APPLICATION

Apply the first coat after diluting with water (about 10%) (1); the second coat must be applied at least 6 hours later, and anyway when the surface is completely dry. The dilution will always depend on the type of substrate and the environmental conditions. We always recom-

mend applying two coats, preferably criss-crossing them. The product can be applied with a paintbrush, a roller, a large brush or it can be sprayed. The surfaces must be pitched sufficiently to drain rainwater. INDECOLOR

TEST REPORT



Test report on solar reflectance
Department of Mechanical and Civil Engineering
University of Modena and Reggio Emilia

and INDECOLOR COOL REFLEX are not suitable for flat surfaces where water stands for prolonged periods. In fact water standing for prolonged periods not only reduces the adhesion of the paint but also leads to accumulations of dirt and consequently a fall in reflectivity and in the output of solar panels.

To keep reflectivity and therefore efficiency high, we recommend periodic maintenance of the surfaces, with a visual inspection and removal of the dirt by washing with water.

For application on sheet metal roofs, apply in advance a gripping base coat of JOINT DECK, following the procedure indicated in the relevant technical sheet.

For application on tiles spread a first coat as an insulating (See following)

TECHNICAL CHARACTERISTICS

	Standard	INDECOLOR		INDECOLOR COOL REFLEX		
Appearance		Liquid		Liquid		
Colour		Grey Red Green Brown	Copper	White	Grey	Red Green
Density	EN 2811-1	1.60 ± 0.10 kg/L	1.15 ± 0.05 kg/L	1.60 ± 0.10 kg/L		
Dry residue - a 130°C	UNI EN ISO 3251	69 ± 3%	25 ± 3%	69 ± 3%		
Brookfield viscosity	Internal method	12 500 ± 2 500 cps	-	15 000 ± 5 000 cps		
Storage in original packaging in a dry place, away from frost		12 months		12 months		
Workability characteristics						
Application thickness		0.2 ÷ 0.4 mm (in two coats)		0.2 ÷ 0.4 mm (in two coats)		
Waiting time - for dust-free drying (*)		approx 2 ÷ 4 hours		approx 2 ÷ 4 hours		
Waiting time - till tack-free drying (*)		approx 4 hours		approx 4 hours		
Waiting time - for applying each coat over the previous one (*)		minimum 6 hours		minimum 6 hours		
Waiting time - for total dry (*)		approx 12 ÷ 24 hours		approx 12 ÷ 24 hours		
Application temperature		+5°C ÷ +35°C		+5°C ÷ +35°C		
Application		manual or spray		manual or spray		
Performance characteristics						
	Standard	Product performance		Product performance		
Solar reflectance	ASTM E-903	-		0.72 (**)	0.44 (**)	0.40 ÷ 0.45
Emissivity in the infrared	ASTM C-1371	-		0.90 (**)	0.92 (**)	>0.80
SRI (Solar Reflectance Index)	ASTM E-1380	-		89 (**)	51 (**)	>29
Reduction in temperature - over grey slated membrane (72°C)	Internal method	-		>20°C	>15°C	>10°C
Exposure to artificial weathering - QUV Test	EOTA TR 010	No change evident		No change evident		
Thermal resistance - Working temperature		-30°C ÷ +90°C		-30°C ÷ +90°C		

Test conditions: temperature 23±2°C, 50±5% R.H. and air velocity in test area <0.2 m/s. These parameters may vary based on the specific conditions of the worksite: temperature, humidity, ventilation, porosity of the substrate. (*) The stated times may be longer or shorter as the temperature decreases or increases.

(**) Test report Department of Mechanical and Civil Engineering - University of Modena and Reggio Emilia

Grey RAL 7004 - Red RAL 3009 - Green RAL 6025 - Brown RAL 8016 - White RAL 9010

fixative, diluting the product with 30% water.

If the surfaces appear to be particularly porous and chalking, apply the acrylic primer PRIMER FIX or BETON PRIMER S, following the procedure indicated in the relevant technical sheet.

• COVERAGE

Coverage depends on the nature and porosity of the substrate.

The consumption per coat, on aged smooth membranes is about 200÷300 g/m², whereas on slated membranes, it is about 350÷450 g/m². Applying COPPER coloured INDECOLOR uses 30% more product.

• PRECAUTIONS

- Apply only to surfaces where rainwater drains properly; do not apply on surfaces subject to standing water.
- Do not apply on wet or damp surfaces.
- Do not use for tanks, cellars or channels subject to strong water backflow or pressurised water.
- Do not use on surfaces or containers where edible liquids and drinking water are kept or which may co-

me into contact with solvents or mineral oils.

- Keep the containers sealed before use.
- Apply at temperatures between +5°C and +35°C. Do not apply in extremely hot or cold conditions. Do not apply when there is a risk of the temperature falling below +5°C while the paint film is drying. Do not apply on very hot surfaces because the film-forming process would be accelerated excessively, with negative consequences for the product's cohesion and adhesion to the surface.
- Do not apply in very damp conditions or if there is a risk of rain while the film is still drying.
- Apply the second coat when the first coat is completely dry.
- The product must not be walked on, except for periodic maintenance.
- New, freshly applied bituminous surfaces usually have superficial 'outcrops' of hydrocarbons, which prevent the coating from adhering perfectly. You are recommended to apply the product to the surface no earlier than 6 months after they have been laid, which should be long enough to eliminate such "outcrops".

Sometimes 6 months waiting is not always sufficient and we therefore advise you to assess the surface before applying the product by carrying out experimental tests using sticky tape in order to evaluate the amount of dirt present and feasibly the level of adhesion (the tests are described in the booklet entitled "Waterproofing Guide"). If the surface is dirty, clean by brushing and washing with water. For new, talced and sanded membranes, if you cannot wait for the membrane to season or if there is talc residue or surface outcrops, it is essential to prime the surface with PREPAINT, as indicated in its technical data sheet. - Slated membranes may be coated immediately after installation even without using the fixer, once the surface has been thoroughly cleaned. - Membranes with fabric finish (textflamina) must be coated immediately after installation.

- After use clean the tools with water and, if the product has dried, it is recommended to remove it with white spirit or hot water.
- Not frost-proof: store at temperatures above +5 °C

PACKAGING

INDECOLOR

- 20-kg Pail
- 10-kg bucket
- 5-kg bucket

INDECOLOR - Copper colour

20-kg Pail

INDECOLOR COOL REFLEX

20-kg Pail

• FOR ANY FURTHER INFORMATION OR ADVICE ON PARTICULAR APPLICATIONS, CONTACT OUR TECHNICAL OFFICE • IN ORDER TO CORRECTLY USE OUR PRODUCTS, REFER TO INDEX TECHNICAL SPECIFICATIONS •

index
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the numerous possible uses and the possible interference of conditions or elements beyond our control, we assume no responsibility regarding the results which are obtained. The purchasers, of their own accord and under their own responsibility, must establish the suitability of the product for the envisaged use.

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