

COATING VOLTAIKA

Reflective & protective coating for bituminous membranes



Description

VOLTAIKA is a special single component coating, developed to **specifically increase the efficiency of photovoltaic systems** and to protect polymer bitumen membranes. VOLTAIKA can also be applied on plasters, concrete & fiber cement, wood and metal surfaces as well as roof tiles.

VOLTAIKA is particularly suitable for the protection of polymer bitumen membranes self-protected with mineral slates or polypropylene mat.

The special copolymers used make VOLTAIKA resistant to aging, UV rays and chemical & physical aggressions.

The particular white reflective finish, besides extending the life of the waterproofing system, reduces the temperatures both on the external surface as well as in the interior of the building, with a consistent reduction of energy consumption.

Furthermore the very high emissivity benefits the dissipation of build up heat during the night time.

Areas of usage

VOLTAIKA increases the efficiency of photovoltaic panels and provides excellent protective results for polymer bitumen membranes against atmospheric agents and sun rays.

Application and consumption

Approximate consumption

The product is ready for use, eventually dilute with clean water (max. 10%).

To obtain the best results, the surface to be treated must be clean, exempt of oils and grease, dry and with the correct slopes to avoid ponding water.

Warning:

like all water-based paints, VOLTAIKA cannot be applied in the presence of ponding water.

Apply VOLTAIKA paint only on roofs with sufficient slope that allows for rainwater to runoff within 24 hours (UNI 8627).

We suggest not to use on dual reinforced membranes.

Do not apply the product below +5 °C and in adverse weather conditions (rain, wind, etc.).

The product can be applied by brush, roller and spray.

To obtain an ideal and homogenous application it is suggested to use between 200-400 g/m² per coat.

It is suggested to apply two coats to obtain a good result.

The second coat must be applied after the first has completely dried (approx. 6-24 h).

Before applying the material, make sure to mix the product to obtain a homogenous solution.

The suggested consumption rate is purely an indication and refers to smooth and partially absorbing surfaces; slight differences may occur depending on the type of surface and the applicator.

We suggest that to verify the exact consumption a preliminary trial application be carried out.

N° of suggested coats

Minimum 2.

Method of application

VOLTAIKA can be applied by brush, roller, spray and airless.

Dilution (by volume)

The product is ready for use, therefore no dilution is necessary; if dilution is required this should be done with clean water and not above 5-10%.

Packaging

14 kg pails.

1) application by roller



2) application by airless



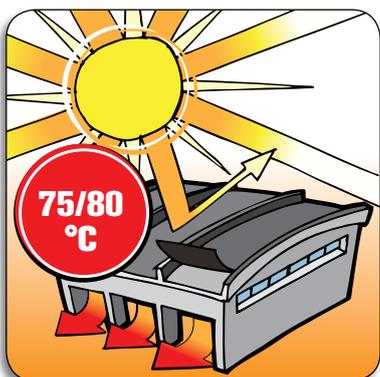
3) application by brush



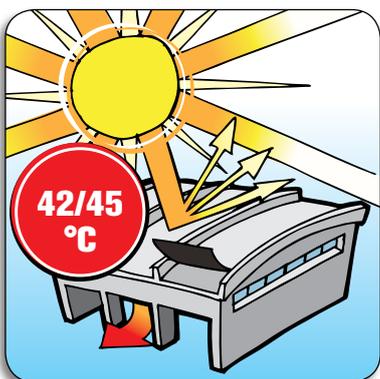
- temperatures
- + reflected light
- = **increases efficiency of photovoltaic systems**



Roof with black membrane



Roof with membrane + VOLTAIKA



LEGEND

Reflected heat

Transmitted heat

Advantages

Emissivity and reflection of light

VOLTAIKA refracts and increases the diffusion of direct light, **increasing the yield of photovoltaic systems.**

The excellent emissivity of VOLTAIKA benefits the dissipation of accumulated heat during the night.

Temperatures

Reduces considerably the temperature.

The temperature of a black membrane during summer can reach 75-79°C.

The temperature of a black membrane coated with VOLTAIKA during the same period is of 45°C. The inside temperature can diminish by up to 5°C, helping to reduce costs of air-conditioning.

A roof protected by VOLTAIKA is a “cool roof”, in other words with the capacity to reflect back the sun rays and with a high value of infrared emissivity, therefore the roof has the capability to return to the atmosphere, by means of reflection, most of the sun's heat.

Technical data

Technical characteristics	Value
Specific weight (ISO 2811)	1.33 ± 0.05 kg/lit
Viscosity at 23 °C (ISO 2884)	12000-18000 cPs (R6 RPM50)
Finish when dry	Opaque
Type of binder	Copolymer in water emulsion
Color	White
pH when tested	8.3 ± 0.2
Drying time (at 20 °C & U.R. of 60%)	Dry at touch: 3 h Ready for 2 nd coat: 24 h
Complete Polymerization at 20 °C	20 days
Maximum VOC value	<40 g/l
Reflectance (bitumen membrane with Voltaika coating)	76%
Emissivity (bitumen membrane with Voltaika coating)	90%
SRI (Solar Reflectance Index) (bitumen membrane with Voltaika coating)	94 - 94 - 95

The indicated values in this technical data sheet are obtained by means of laboratory and site tests and therefore are susceptible to changes which can be made based on new data and continuous research without prior notice. The indications on methods of use and possible results with our product, correspond to our expertise without however being binding or cause of responsibility. Therefore the sales of the product is not covered by an application guarantee and is made with the intent that the end user determines the correct suitability of it's application.

Packaging

	Drum size	Drums x pallet
Voltaika	14 kg	42

Pluvitec reserves the rights to change or modify the nominal values without prior notice or advice.