

# VOLTAIKA COVER

Thermal coating for passive cooling of buildings



## Description

VOLTAIKA COVER is a special thick coating, useful as a thermal insulation, in order to reduce the internal temperature of a building, specifically in the summer period. VOLTAIKA COVER is suitable as coating on vertical walls in any type of masonry.

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

VOLTAIKA COVER is also elastic, waterproof and, at the same time, breathable.

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.

Used inside buildings, it can help reduce the formation of mould, making the temperature uniform in the wall-ceiling corner, where mold production is normally concentrated.

## Areas of usage

VOLTAIKA COVER is an overlay with a pasty consistency, to be applied as a skim coat and finish on exterior walls by trowel; ideal for reducing of summer energy consumption, thanks to passive cooling of the building's external walls.

## Application and consumption

Wait for complete curing of the CLS (28 days) before applying VOLTAIKA COVER.

Before use, mix the product with suitable mixer at low speed for a few minutes so that no air is incorporate into the mixture.

For best results it is always recommended an initial treatment as primer, diluting the product with about 15-20% of drinking water, with a consumption of approximately 250-300 g/m<sup>2</sup>.

Subsequently, as an overcoat, we suggest several coats of application of the product as it is (or at most a minimum dilution) until a homogeneous homogeneous finish.

Subsequent coats should be applied after perfect drying of the previous one (approx. 3-6 h).

The product can be applied by smooth spatula or specific putty airless.

If you prefer to obtain a surface with a certain degree of roughness, you can finish using VOLTAIKA COVER diluted with 15% potable water, using a roller or brush for application.

Do not apply the product below +10°C and in adverse weather conditions (rain, wind, etc.).

To obtain the best results, the surface to be treated must be clean, exempt of oils, grease and dry.

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.

In order to determine the actual yield, it is it is advisable to carry out a preliminary preliminary sample.

In case of application over an existing plaster, we recommend a thorough hydro-washing to eliminate friable parts and a subsequent maintenance of the plaster, if necessary.

Finally, a test is always recommended to verify in advance the compatibility.

### N° of suggested coats

Minimum 2.

### Method of application

VOLTAIKA can be applied by smooth spatula or specific putty 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.

### Storage

Store the product in its original pail, sealed and at temperatures between +5°C and +35°C, protected from direct sun light and frost.

## Advantages

- The product is ready to use, requiring nothing but water for its application.
- It significantly reduces the internal temperature of buildings, with considerable savings in air-conditioning costs in summer.
- Its composition also makes the product partially elastic; this allows to follow thermal expansion and thus reduce annoying cracks on the plaster.
- Used in combination with VOLTAIKA - Cool Roof paint - allows passive cooling of the entire building.
- VOLTAIKA COVER and VOLTAIKA increase the yield of photovoltaic panels.

## Technical data

**ID MAGS19**

Product identification data / technical characteristics	Norm	Average value	Tolerance
<b>Appearance</b>		Creamy	
<b>Colour</b>		Extra reflective white	
<b>Viscosity</b>		30000	± 5000
<b>Specific weight</b>	ISO 2811-1	1,05	± 0,05
<b>Residual dry matter</b>	ISO 3251	57%	± 2 pp
<b>pH</b>	ISO 2431	8,0	± 0,3
<b>Flash point</b>		Not flammable	
Physical - mechanical characteristics	Norm	Average value	Tolerance
<b>Cold flexibility</b>		-	
<b>Operating temperature</b>		da -5°C a +100°C	
<b>Tensile strength</b>		-	
<b>Elongation at break</b>		-	
<b>Artificial exposure to atmospheric agents (QUV Test)</b>		After 2000 hours no swelling or cracking. Slight variation in color that does not change its characteristics.	
<b>Thermal conductivity <math>\lambda</math></b>	UNI EN 12664 ASTM E1530	<b>0,344 - 0,366 W/mK</b>	
Application data	Average value		
<b>Shelf life in original packaging</b>	12 months		
<b>Storage conditions</b>	Temperature higher than 0°C in unopened and closed package		
<b>Final thickness of the layer</b>	approx. 500 g/m <sup>2</sup> per coat		
<b>Application type</b>	smooth spatula or specific putty airless		
<b>Minimum layers</b>	Primer + minimum 2, better if crossed		
<b>Application stages</b>	PRIMER	Dilute the product with av. 15% of drinking water	Consumption: 250-300 g/m <sup>2</sup> depending on the support
	FIRST COAT	Ready to use	<b>Consumption: 1 kg/m<sup>2</sup></b>
	NEXT COATS	Ready to use	
<b>Total full cycle consumption (including primer)</b>	1,2 Kg/m <sup>2</sup>		
<b>Final dry product thickness</b>	650-700 micron		
<b>Air application temperature</b>	min - max 10-35°C		
<b>Surface application temperature</b>	min - max 10-35°C		
<b>Air humidity</b>	max. 60%		
<b>Surface humidity</b>	max. 5%		
<b>Minimum slope</b>	min. 3%		
<b>Waiting time touch dry</b>	1 hour		
<b>Waiting time second layer</b>	3 hours (after completely dry)		
<b>Waiting time complete crosslinking</b>	3 days (+20°C - 50% U.R.)		

The product can only be walked on for maintenance and repairs. Protective paints for waterproofing membranes or cementitious structures may have cracking due to linear thermal expansion of the surfaces. It is therefore advisable to provide for their restoration by maintenance of the roof periodically according to the allocation of the structure, atmospheric pollution and degradation of the surface; typically every 2-4 years.

Final performance EN 1504-2	Norm	Limits of acceptability	Results
Adhesion to concrete by direct traction:	UNI EN 1542	$\geq 0,8 \text{ N/mm}^2$	$> 0,8 \text{ N/mm}^2$
Permeability to water expressed as capillary absorption:	UNI EN 1062-3	$\leq 0,1$ ( $\text{kg/m}^2 \cdot \text{h}^{0,5}$ )	0,01 ( $\text{kg/m}^2 \cdot \text{h}^{0,5}$ )
Water vapor transmission:	UNI EN 7783-2	class I: $S_D < 5 \text{ m}$	<b>1,10 m</b>
Permeability to carbon dioxide (CO <sub>2</sub> ):	UNI EN 1062-6 Method A	$\geq 50 \text{ m}$	<b>&gt; 100 m</b>

### Values of "Cool Material" coating \*

Technical characteristics	Norm	Average value
Reflectivity	ASTM E903-12	<b>0,87</b>
Emissivity	ASTM C1371-15	<b>0,90</b>
SRI (Solar Reflectance Index) Low / Medium / High wind speed	ASTM E1980-11	<b>110-110-109</b>

\* Test report CERTIMAC

### Regulatory requirements

CAM - Minimum Environmental Criteria *		
Type of roof	Slope	SRI
Low slope	$\leq 15\%$	76
High slope	$> 15\%$	29

\* According to the national action plan on Green Public Procurement (PANGPP) 11/10/17 point 2.2.6

DM 26/06/2015 - National guidelines for the energy certification of buildings	
Type of roof	Reflectivity
Flat roof	0,65
High slope	0,30



### Packaging

Pail size	Pails x pallet
14 kg	42

We reserve the rights to change or modify the nominal values without prior notice or advice. The information contained in this data sheet are based on our experience. We cannot take any responsibility for a possible incorrect use of the products. The customer has to choose under their own responsibility a product fit for the intended use.