



ROOFING

reflex+

ULTRA-REFLECTING PROTECTIVE COATING

Technical data sheet

Description

REFLEX+ Single-component ultra-reflecting coating. Ecological product highly resistant to atmospheric agents having a high solar reflectance index (SRI = 105%) certified by EELab (Energy Efficiency Laboratory – Department of Engineering Enzo Ferrari -University of Modena and Reggio Emilia).

Fields of application

Due to its solar reflectance index, it is one of the best materials used for COOL ROOF interventions allowing to reduce covering temperature, highly reducing summer overheating due to solar radiation of buildings and coverings, thus improving living comfort with consequent reduction in consumption of electricity used for air conditioning.

Suitable as a protection layer for waterproofing bituminous membranes, either polished (with VELAPRIMER ACW) or slated, which not only provides protection against UV rays, but also helps solidify grit, increasing its “useful life”. It can also be applied to concrete, clay, metal laminate and wooden surfaces.

Laying instructions

REFLEX+ can be directly applied by brush, broom, roller or airless sprayer. It should be laid on perfectly dry and clean surfaces free of dust, oil and grease. The surface should have a 3 percent minimum slope with no area of standing water.

For a correct hiding power, it is advisable to apply two coats of product, waiting until the first coat has dried before applying the second one.

Consumption: 0,375 - 400 gr/m² of product for each coat.

Drying time: approximately 4/6 hours. Mix well before use.

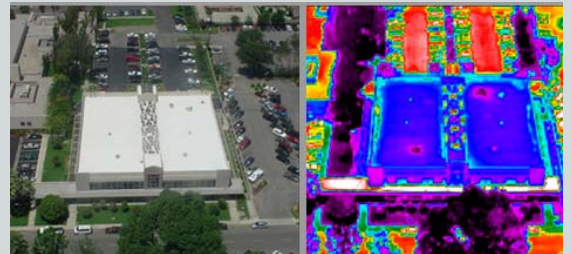
Ready to use product. The solar reflectance index has been certified with a product applied as it is (undiluted) with a consumption rate equal to the value indicated above.

Certification

CERTIFIED SOLAR REFLECTANCE INDEX SRI=105%

		Tested@EELab		www.eelab.it
		Customer: IIVELA S.r.l. Sample name: Solar Reflex Date: 27/05/2013		
SR %	IE %	SRI %	ST °C	
84	88	105	42.6	

Additional summer comfort can be achieved reducing exposure to solar radiation, with consequent electricity savings for air conditioning systems, reducing HEAT ISLAND effect.



REFLEX+ Product capable of increasing energy performance of PV solar panels not only additional diffuse and reflected light, but also because the system operates at lower temperatures.





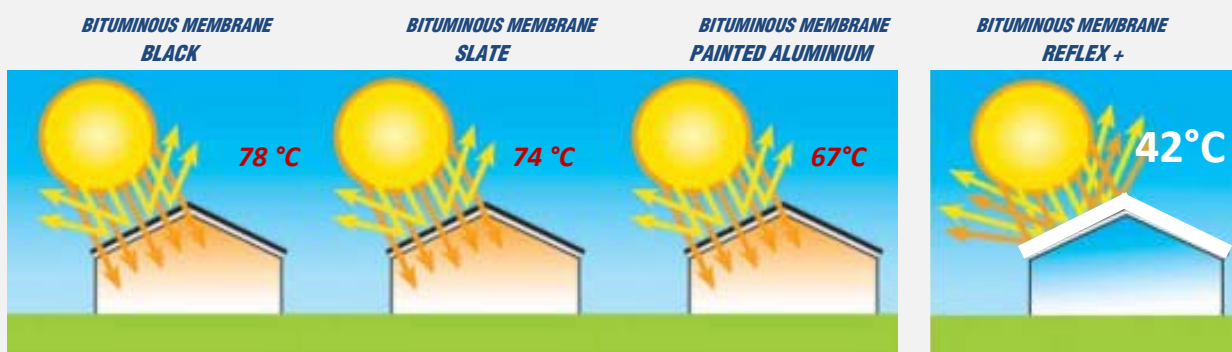
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Energy efficiency- comparative table



PRODUCT TYPE	REFLECTANCE	EMISSIVITY	SRI %	MAXIMUM TEMPERATURE
<i>Black bituminous membrane</i>	<0,10	>0,80	1	78°C
<i>Grey slate membrane</i>	<0,10	>0,80	1	74°C
<i>White slate membrane</i>	<0,45	>0,94	53	63°C
<i>Painted aluminium membrane</i>	<0,45	>0,60	40	67°C
<i>Self-protected membrane with copper foil</i>	<0,80	>0,60	94	60°C
<i>Self-protected membrane with aluminium foil</i>	<0,80	>0,70	96	55°C
<i>Clay roofing tiles</i>	<0,30	>0,90	32	70°C
<i>Traditional white polymer membranes</i>	<0,45	>0,80	48	64°C
<i>Stone tiles and slabs</i>	<0,70	>0,90	85	50°C
<i>Colouring with traditional white coatings</i>	0,50-0,60	0,70-0,80	55-69	56-63°C
<i>Bituminous membrane with REFLEX+</i>	84	88	105	42°C*

* EELAB test report – Department of Engineering Enzo Ferrari, University of Modena and Reggio Emilia



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Warning

Do not apply at a temperature below + 5°C or higher than + 35°C, always considering either environmental or substrate temperature. The product should not be applied outdoors **in the presence of persistent fog or in case of imminent risk of rain** which may wash it away, ensuring that climatic conditions remain unchanged even 72 hours after application.

Check the presence of any surface condensation (**dew point**) which may affect product characteristics. Checks should be carried out even before applying the second coat.

It's a single-component ready to use product which should not be diluted. Before application, shake it slowly only if necessary.

Do not apply to recently laid bituminous membranes, since the migration of light substances contained in bituminous mixes may cause coating detachment and colour alteration. For smooth oxidized membranes or in the presence of residues of ancient coatings, it is advisable to use VELPRIMER ACW before applying the product.

The surface should have a 3 percent minimum slope with no area of standing water. In summer, at the highest irradiance levels, it is advisable to apply multiple low thickness layers in order to avoid abnormal product drying.

Chemico-physical properties

Parameter	Value	Measurement unit	Tolerance	Test method
APPEARANCE	PASTY LIQUID PRODUCT	-	-	-
COLOUR	ULTRA WHITE	-	-	-
DRY RESIDUE	63	%	± 5	UNI EN ISO 3251
SPECIFIC WEIGHT	1,40	Kg/l	± 0,05	UNI EN ISO 2811-1
BROOKFIELD VISCOSITY (20 RPM, Spindle n°5, 20 °C)	5300	Cps	± 500	-
pH (25°C)	8,5	-	± 0,5	-
DRYING TIME AT 23°C-50% r.h.*	6	hours	± 1	-
SOLAR REFLECTANCE	0,84	-	-	ASTM E-903
INFRARED EMISSIVITY	0,88	-	-	ASTM C-1371
S.R.I. (Solar Reflectance Index)	105	-	-	ASTM E-1380

*Time values can be higher or lower than those indicated depending on the temperature detected

Packaging and storage

Products packed in 5 and 20 kg buckets to be stored in sheltered areas at a temperature not below + 5 °C or not higher than + 35°C. **IT FEARS THE FROST.** It must be used within one year of the purchase date

The above-mentioned values can be subject to update or change. IIVELA S.r.l. reserves the right to modify them at any time without prior notice. For a correct use of our products, see technical specifications. For further information or any special use, please contact our technical department. Any suggestions or technical information provided represent our best knowledge regarding product characteristics and use. Considering different applications and any possible interference of elements beyond our control, the buyer must declare under his own responsibility that the product is suitable for the intended use.