



*Rely on it.*

RENOLIT ALKORBRIGHT



EXCELLENCE  
IN ROOFING



# STAY COOL, **RENOLIT** ALKORBRIGHT

With the development of the **RENOLIT** ALKORBRIGHT membrane, the **RENOLIT** team has created an extra energy friendly and ecologically sound solution for sealing your roof.

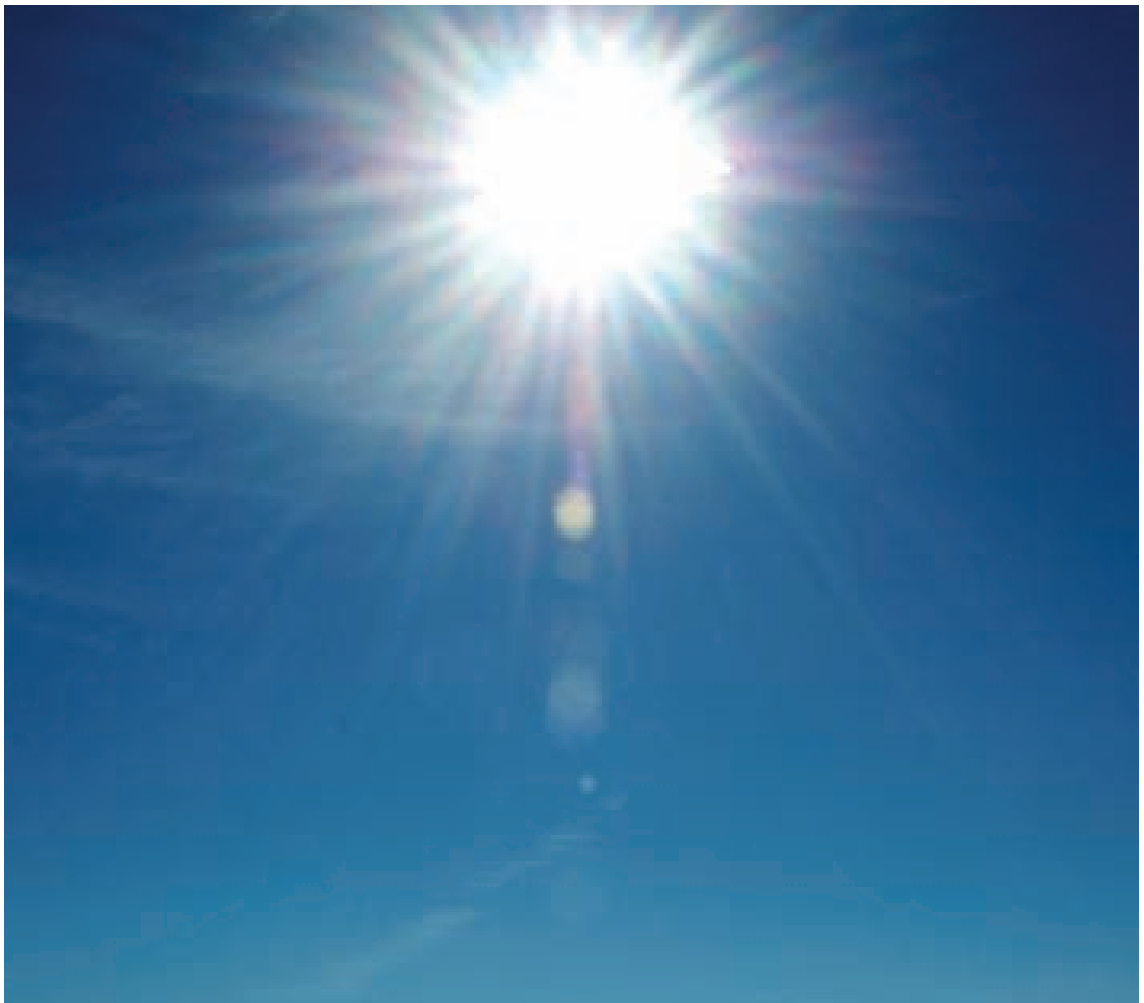
The new 'cool roof' membrane is an extension to the already wide range of **RENOLIT** ALKORPLAN roofing membranes.

What makes **RENOLIT** ALKORBRIGHT so special is the combination of well-known advantages and qualities of **RENOLIT** ALKORPLAN roofing membranes together

with the high reflection of the sunlight.

**RENOLIT** ALKORBRIGHT stands for durable and extra high reflection.

Cool roof means a white coloured/coated roofing membrane that has a large reflection of the solar radiation. This reflection of the sunlight has a positive influence on the roofing membrane, the interior climate and on the surroundings of a building.





# RENOLIT ALKORBRIGHT SYSTEM

## PRODUCT INFORMATION

### RENOLIT ALKORPLAN F<sup>35276</sup>

Calendered/laminated membrane of flexible PVC with woven polyester reinforcing. Conforms to UEAtc guidelines. Certificate available on request.

External fire: complies with B<sub>ROOF</sub> t1 according to ENV 1187\*

\* See modalities

CE marking

- 0679-CPD-0156 (ETAG 006)

- 0679-CPD-0157 (ETAG 006)

Complies with EN 13956.

CE marking:

- 0679-CPD-0171 (EN 13956)

- 0679-CPD-0172 (EN 13956)

For glued roofing structures, a fleecebacked **RENOLIT** ALKORBRIGHT membrane is available (**RENOLIT** ALKORPLAN A<sup>35279</sup>).

Product data	Method	Requirements according to UEAtc	Average production values		Units
			RENOLIT ALKORPLAN F <sup>35276</sup>	RENOLIT ALKORPLAN A <sup>35279</sup>	
Tensile strength	EN 12311-2 (A)	L ≥ 800	1251	1170	N/50 mm
		T ≥ 800	1196	1204	N/50 mm
Elongation at break	EN 12311-2 (A)	L ≥ 15	18.1	80	%
		T ≥ 15	19.9	99	%
Dimensional stability (6h at 80 °C)	EN 1107-2	T ≤ 0.5	-0.16	-0.27	%
		L ≤ 0.5	-0.02	0.11	%
Cold track temperature (-20 °C)	EN 495-5	no cracks	no cracks (-25°C)	no cracks (-25°C)	-
Tear strength	EN 12310-1	L ≥ 150	522	381	N
		T ≥ 150	574	389	N
Lamination strength	EN 12316-2	≥ 80	179	95	N/50 mm
Vapour diffusion resistance (μ)	EN 1931	-	15.000 (calc.value)	10.000 (calc.value)	-
Resistance to static perforation	EN 12730	-	L 20	L 20	kg

Size/Weight	Thickness	Width	Weight	Roll length	Roll weight
<b>RENOLIT</b> ALKORPLAN® F <sup>35276</sup>	1,5 mm	1,05 m	1,85 kg/m <sup>2</sup>	20 lm	ca. 41 kg
<b>RENOLIT</b> ALKORPLAN® A <sup>35279</sup>	1,5 mm	2,10 m	2,25 kg/m <sup>2</sup>	20 lm	ca. 71 kg

## Installation guidelines

The installation of the **RENOLIT** ALKORBRIGHT roofing membrane is almost identical to that of the **RENOLIT** ALKORPLAN F roofing sheets. A standard minimal slope of 30mm/m has to be maintained.

In combination with photovoltaic cells, a slope of 60mm/m has to be maintained. The embossing of the **RENOLIT** ALKORBRIGHT roofing membrane reduces the risk of slipping when installing the membrane.

# PROPERTIES OF THE **RENOLIT** ALKORBRIGHT SYSTEM

## White in the mass.

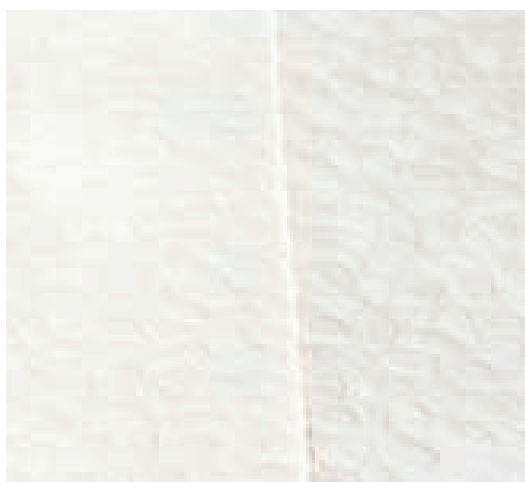
**RENOLIT** is one of the few manufacturers who offer a completely white PVC-P roofing membrane. Due to the fact that our roofing membrane is white in the mass, a large reflection of the sunlight is possible. In addition to the increased reflection, the installation also benefits from the white underlayer.



When installing a standard white roofing membrane, the welding seams will stand out against the white roofing surface.

The white welding seams barely catch the eye and ensure an aesthetic and homogeneous white roofing surface.

The installation of the **RENOLIT** ALKORBRIGHT roofing membrane is almost identical to that of the **RENOLIT** ALKORPLAN F roofing membranes. Check the **RENOLIT** ALKORPLAN F brochure for the installation guidelines and technical details. Solvent welding is not allowed.



In the case of a **RENOLIT** ALKORBRIGHT roofing membrane, the homogenous welding seams are barely visible.

## ADVANTAGES OF THE **RENOLIT** ALKORBRIGHT SYSTEM

### In pursuit of a durable reflection.

A roofing membrane that is initially white will be subject to pollution after a relatively short time. There will inevitably be marks due to the installation of the membrane itself; The roofer can not complete the installation without walking on the membrane.

Of course a roof is strongly subjected to environmental pollution.

The degree of reflection of the sunlight will

decrease from the moment of installation. In order to resist this pollution, the **RENOLIT** ALKORBRIGHT roofing membrane is provided with a transparent protection layer. This 'clear coat' makes sure that less dirt sticks to the surface of the membrane and as a consequence strongly delays the loss of reflection. The roofing membrane is easier to clean with water and thus easier to maintain.

# ADVANTAGES OF THE **RENOLIT** ALKORBRIGHT SYSTEM

In addition, the dirt will be largely washed away by the rain. The 'clear coat' provides the **RENOLIT** ALKORBRIGHT membrane

an additional protection against UV radiation. Solvent welding is not allowed, as it may cause damage to the clear coat.



Dirty footprint caused by installation



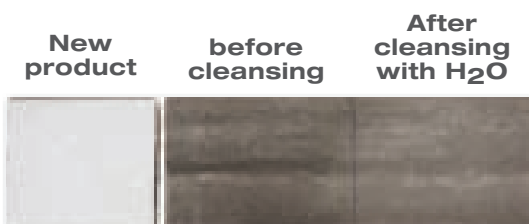
Easily erasable with a clean cloth



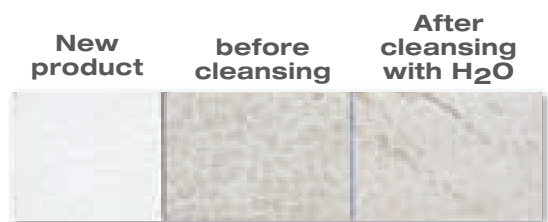
Easy to clean with water

## Visible advantages of the *Clearcoat*

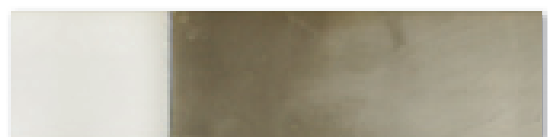
The influence of the environmental pollution can be simulated with the test according to ISO 11378/2. In this test, the membrane is exposed to a mixture of water, mud, silica gel, cement and carbon black during a period of four hours. A comparative study of some existing roofing membranes gives the following result:



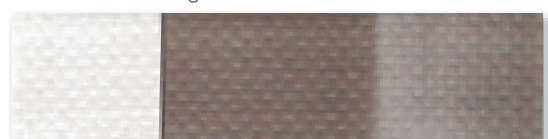
Bitumen roofing membrane with a smooth, reflective acrylic coating on top



**RENOLIT** ALKORBRIGHT



White TPO roofing

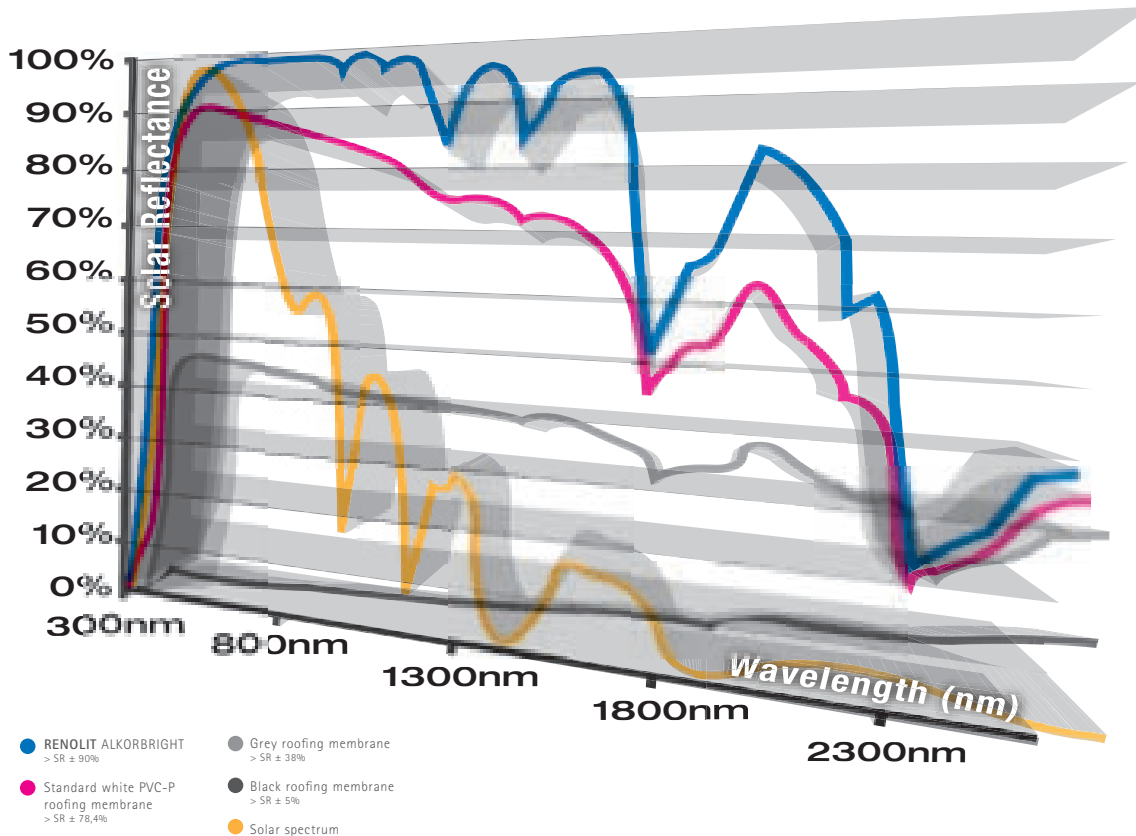


White PVC-P roofing membrane without embossing



# ADVANTAGES OF THE **RENOLIT** ALKORBRIGHT SYSTEM

Reflection in figures



With a solar reflection of 90%, the **RENOLIT** ALKORBRIGHT roofing membrane can consider itself to be at the absolute top of the cool roof roofing membranes. In general, the darker the colour of the membrane, the less sunlight that will be reflected. Roofing sheets with a white top layer and a grey or black under-layer also have a significantly lower reflection rate of sunlight.

## Avoiding *heat islands*

When less heat is generated near the roofing membrane, consequently less heat is transferred to the environment. Especially in urban and industrial areas, the **RENOLIT** ALKORBRIGHT roofing membrane will have a positive influence on the temperature in the immediate environment of the building.



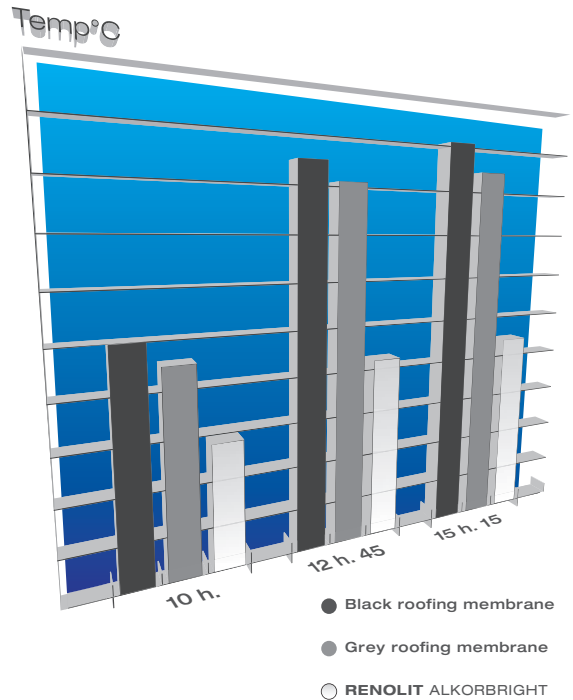


# ADVANTAGES OF THE **RENOLIT** ALKORBRIGHT SYSTEM

## Temperature near the roofing membrane

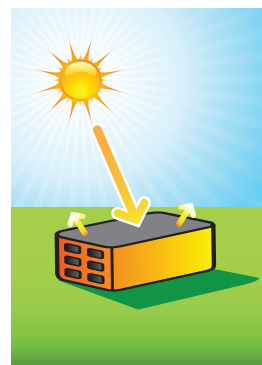
Thanks to the high reflection of the sunlight, only a limited part of the solar radiation is transferred into heat. Variations in temperature of 45°C between a black roofing sheet and the **RENOLIT** ALKORBRIGHT roofing membrane are not unusual. Due to the reduced surface temperature of the **RENOLIT** ALKORBRIGHT roofing membrane, the membrane is subjected to less temperature changes. A stable rate of UV radiation will lead to an increased life span of the membrane.

*Measurements on the roof of our production plant in Oudenaarde, Belgium, show a difference in temperature of 45°C between a membrane in a charcoal colour and the **RENOLIT** ALKORBRIGHT roofing membrane.*

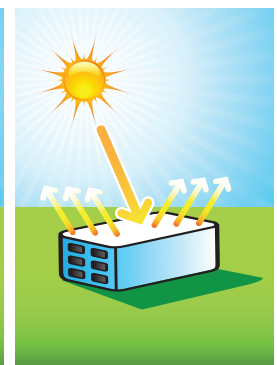


## **RENOLIT** ALKORBRIGHT as an energy saving and ecologically sound membrane

The installation of **RENOLIT** ALKORBRIGHT on the roof will have a strong influence on the interior climate of the building and the related air conditioning costs. Due to the low absorption of solar radiation (heat), the heat will need considerably more time to enter the building. Inside the building, the peak temperature will be reached much more slowly and as a consequence the build up of heat will be smaller. This is particularly relevant in southern European countries. A difference in temperature of only a couple of degrees generates a more enjoyable working environment. In addition, the air conditioning costs can be lowered considerably. This lower energy consumption will also decrease the output of CO<sub>2</sub>.



Temperature with a black membrane  
**Surface of the roof = 80°**  
**Inside the building = 30°**



Temperature with **RENOLIT** ALKORBRIGHT  
**Surface of the roof = 40°**  
**Inside the building = 25°**



# ADVANTAGES OF THE **RENOLIT** ALKORBRIGHT SYSTEM

## **RENOLIT** ALKORBRIGHT increases the return generated by solar panels

The return generated by photovoltaic cells relates positively to the solar reflection of the roofing membrane on which the panels are installed.

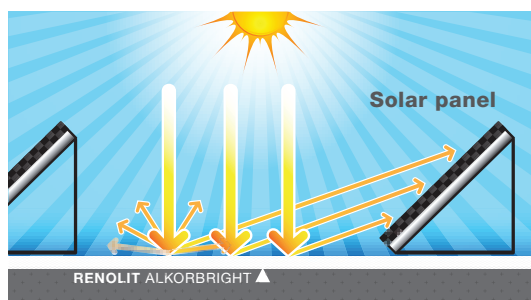
### **THE EFFECT ON THIS GENERATED RETURN IS DUAL:**

A small part of the solar energy that is transferred by the photovoltaic cells comes from the solar radiation that is reflected by the roof. This element amounts to approx. 1% for surfaces with an albedo of 0.2.

For roofing surfaces with an albedo of more than 0.8, like **RENOLIT** ALKORBRIGHT, this part can amount to 4 to 5 %. In reality, this comes down to an increased return on the electrical power of 3 to 4% compared to roofs with a lower solar reflection.

Furthermore, a higher temperature of the roofing surface will have a negative influence on the return of the crystalline silicon cells. An increase of 2°C involves a decrease in return of about 1%. A white reflecting roofing membrane like **RENOLIT** ALKORBRIGHT will lead to a lower air temperature around the photovoltaic modules. This will in turn lead to an increased return.

*\*Albedo or capability reflection of the surface is the relation between the reflected radiation and the incoming radiation.*



### The major advantages of **RENOLIT** ALKORBRIGHT:

- Positive influence on the interior climate of a building
- Increase of the generated return of photovoltaic cells
- High and durable reflection of the sunlight
- Lower energy consumption and air conditioning costs, and consequently, a lower output of CO<sub>2</sub>
- Avoiding heat islands
- Same properties and advantages as the **RENOLIT** ALKORPLAN roofing membranes

The information contained in the present commercial literature has been given in good faith and with the intention of providing information. It is based on current knowledge at the time of issue, and may be subject to change without notice. Nothing contained herein may induce the application of our products without observing existing patents, certificates, legal regulations, national or local rules, technical approvals or technical specifications or the rules and practices of good workmanship for this profession. The purchaser should verify whether import, advertising, packaging, labelling, composition, possession, ownership and the use of our products or the commercialisation of them are subject to specific territorial rules. He is also the sole person responsible for informing and advising the final end user. When faced with specific cases or application details not dealt with in the present guidelines, it is important to contact our technical services, who will give advice, based on the information at hand and within the limitations of their field of expertise. Our technical services cannot be held responsible for the conception of, nor the execution of the works. In the case of negligence of rules, regulations and duties on the part of the purchaser we will disclaim all responsibility. The colours respect the UV resistance required by EOTA, but are still subject to the natural change over time. Are excluded from the guarantee: aesthetic considerations in case of partial repair of deficient membrane covered by the guarantee.

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The British Board of Agrément have assessed the life expectancy of **RENOLIT ALKORPLAN F** used in the United Kingdom to be in excess of 30 years.



**RENOLIT ALKORPLAN** roofing products and systems have a standard guarantee of 10 years, and are installed by approved contractors and installers who are trained and assessed by **RENOLIT**.



All **RENOLIT** membranes for roofing are part of the RoofCollect® collection and recycling programme.



The **RENOLIT** division responsible for the roofing activity has been approved to EN ISO 9001:2000



**RENOLIT (UK)** Cramlington Ltd  
Station Road, Cramlington, Northumberland NE23 8AQ - United Kingdom  
T +44 1670 718283 - F +44 1670 590096 - renolit.cramlington@renolit.com

**LAYDEX Ltd.** - Unit 3 - Allied Industrial Estate - Kylemore Road - Dublin 10  
T +353(0) 1 642 6600 - F +353 (0) 1 642 6601 - sales@laydex.ie

**LAYDEX (NI) Ltd.** - Units 4 & 5 Falcon Way - Belfast BT 12 6 SQ  
T + 44 (0) 2890 382 223 - F + 44 (0) 2890 382 230

**RENOLIT Belgium N.V** - Export Dpt. - Industriepark De Bruwaan 9 - 9700 Oudenaarde - Belgium  
T B +32 55 33 98 51 - F +32 55 31 86 58 - renolit.belgium@renolit.com



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