



*Rely on it.*

# Chilling under a white roof...

RENOLIT ALKORBRIGHT



# Friesland Campina

## CHALLENGE

An absolute must for refrigerated warehouses or dairy processing facilities is to **try to keep the building as cool as possible** and to avoid all causes of heat, in order to keep the cooling costs as low as possible.

*Some decisions can have detrimental effects though. Mechanical fixing of the roofing membrane for example, in case the wrong fastenings are used. Thermal bridging may cause cold – or in this case heat – penetrating through the flat roof fasteners resulting in higher energy bills. And, quite important as well, mechanical fixing will perforate the vapour control layer, which in the case of cool buildings sits uppermost on the insulation. The result being moisture-related damage to the insulation!*

*Furthermore, it has also been proved that the darker the roofing membrane, the less the sunlight will be reflected, the more heat will be absorbed. Again resulting in escalating energy costs. Waterproofing a cool storage warehouse is definitely not easy! In this regard Friesland Campina were looking for a durable and ecological roof solution for their brand new refrigerated distribution centre in Maasdam.*

## SOLUTION

**RENOLIT** came up with the perfect answer: the **RENOLIT ALKORBRIGHT** cool roof membrane.

Here's why! **RENOLIT ALKORBRIGHT** is a completely white PVC membrane reflecting the sunlight up to 90%. **Absolutely the highest solar reflectance rate ever.** Thanks to this membrane, which prevents the interior from warming up, there will be no extra air conditioning expenses.

In addition, an extra protective coating makes sure less dirt sticks to the roofing membrane. This layer will in turn help to maintain a **durable reflection**.

As it is not recommended to install the roof of refrigerated buildings by mechanical fixings, **RENOLIT** presents an appropriate solution. Besides the **RENOLIT ALKORBRIGHT** membrane for mechanical fixing, **RENOLIT** can offer an **RENOLIT ALKORBRIGHT** version with a fleece backing, especially made for bonded systems and so ideal for cool warehouses! A bonded roof system avoids thermal bridging caused by alternatively using mechanical fasteners and ensures a continuous and less interrupted roof surface.

### Fast and DUALfixed

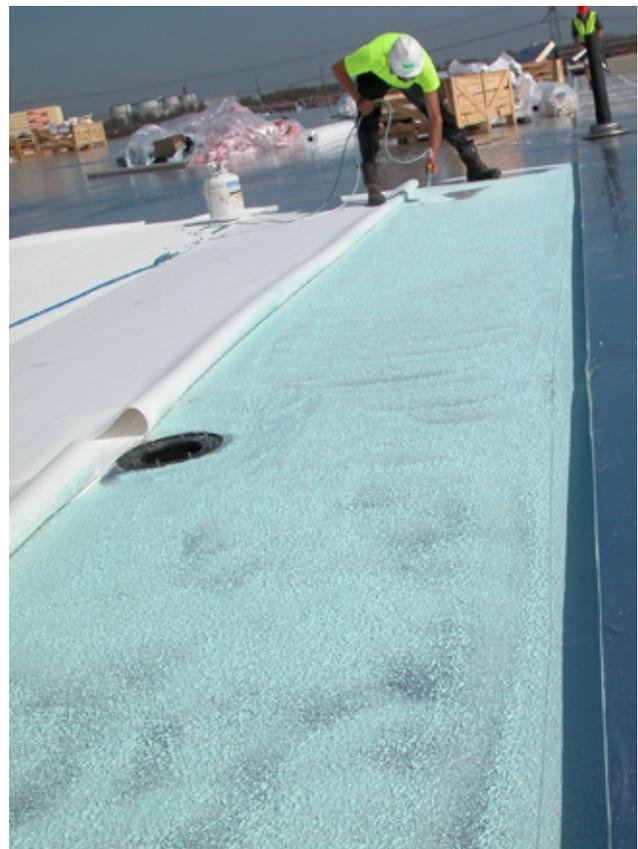
On the Friesland Campina building no less than 8,294 sqm of **RENOLIT ALKORBRIGHT A** was fully bonded. Some additional details regarding the roof build up: on top of the concrete

structure and the PES separation layer, PIR insulation boards were mechanically fixed. The self-adhesive aluminium **RENOLIT** vapour control layer was installed on top of the insulation. In case of refrigerated buildings this is common practice, the interior of the building being the colder side.

Finally, the 2.10 m wide **RENOLIT ALKORBRIGHT** roofing membrane was bonded to the VCL by means of **RENOLIT ALKORPLUS DUALFIX**. This universal polyurethane glue was created specifically for **bonding both roofing membrane and insulation boards**. The DUALFIX glue is atomized on the roof surface with a spray gun, a quick and easy way to install roofing membranes. A significant added advantage is the glue can be used in all weather conditions throughout the year.

Friesland Campina also decided to go for another energy saving solution: PV panels. To fix the solar panels they opted – obviously – for the **RENOLIT ALKORSOLAR** profiles, a fixing system which is hot air welded on to the roofing membrane.

Thanks to their choice to work with **RENOLIT ALKORBRIGHT** roofing membranes, Friesland Campina will certainly save a lot of money. Smart company!





## COOL WAREHOUSE

- Friesland Campina
- Maasdam, The Netherlands
- Primadak Roosendaal Roofing
- Contractor De Vries en Verburg
- Archicom Son en Breugel

## PRODUCTS

- Precast concrete elements
- PES separation layer of 300g/m<sup>2</sup>
- PIR insulation
- Aluminium vapour check **RENOLIT ALKORPLUS**<sub>81002</sub>
- **RENOLIT ALKORBRIGHT A**<sub>35179</sub> 1.5 mm roofing membrane, adhered with **RENOLIT ALKORPLUS DUALFIX**<sub>81065</sub> glue, overlaps hot air welded.