



NURAPLY 3PM PURE WHITE AIR-CLEANING MEMBRANE

Technical Brochure

Product Description

Nuraply 3PM Pure White is an innovative white, solar reflective, eco-friendly, bituminous roofing membrane. It has unique properties that minimize energy usage and help restore the environment.

The most revolutionary and regenerative aspect is the membrane's ability to decompose airborne pollutants into non-toxic by-products when combined with sunlight (UV radiation).

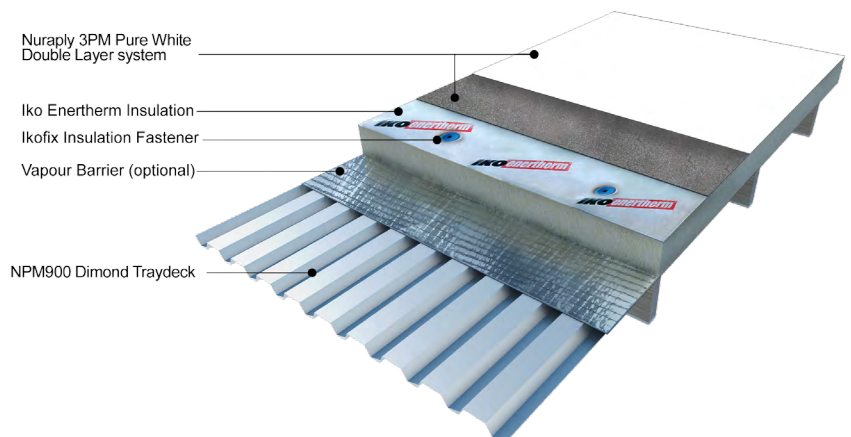
The mineral finish of Nuraply 3PM Pure White is coated with a special type of titanium dioxide (TiO_2). When exposed to UV rays, the membrane acts as a catalyst and converts nitrogen oxides and sulphur oxides (NO_x and SO_x), into harmless and environmentally-neutral substances which are literally washed away by rainfall. These by-products have no measurable impact on the quality of run-off water.

During the process the TiO_2 coating is not degraded, instead the decomposition reaction is catalytic. Therefore, the air purifying action is effective for the life of the Nuraply 3PM Pure White granule-surfaced membrane.

Nitrogen oxides (NO_x) are irritating pollutants which are harmful to health and increase the greenhouse effect. Nitrogen dioxide (NO_2) is a major air pollutant in New Zealand urban areas and National Environmental Standards for Air Quality are regularly exceeded along busy roadsides. ⁽¹⁾

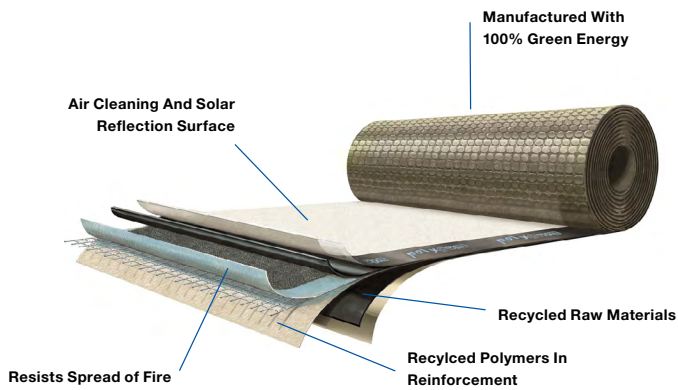
Because of the unique technology, every year, 1,000 square meters of Nuraply 3PM Pure White membrane will offset over 200 kg of nitrogen oxide pollution (NO_x); equalvalent to that produced by approximately 100 vehicles. ⁽²⁾

Want the best system possible: combine Nuraply 3PM Pure White with a Nuratherm Warm roof for a total roofing system that lowers energy use and eliminates harmful pollutants.



1. TP346 Nitrogen Dioxide in air in the Auckland Region: Passive Sampling Results, page 1
2. This is a guide only as offset rates vary by location due to variances in prevailing atmospheric conditions and UV levels





Other Environmental Features

1. With Nuralite 3PM Pure White, you are opting for innovative Air Cleaning Technology. Nuralite 3PM Pure White converts NO_x (nitrogen oxide) and SO_x (sulphur oxide) into harmless environmentally-neutral substances. This air cleaning effect reduces fine particles in the air. Testing to validate the reduction of air pollutants is to ISO 22197-1.

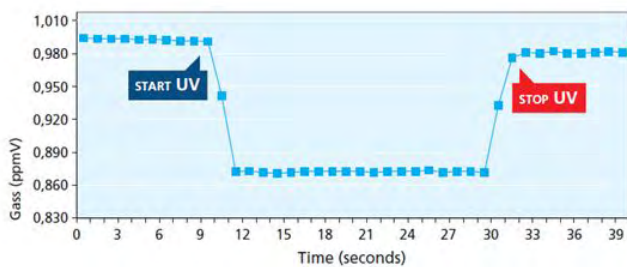


Figure 1: Impact of UV exposure during testing

2. The exposed surface of Nuralite 3PM Pure White consists of a highly reflective white, mineral finish. The membrane's high reflectivity efficiently radiates the absorbed heat through infrared radiation, causing a surface temperature reduction of more than 30°C. Consequently less active cooling is required within the building and air conditioning units operate more efficiently. Solar panels are also demonstrably more effective when placed over a cooler, reflective roof surface.

3. A substantial proportion of the bituminous coating of the Nuralite 3PM Pure White roofing membrane consists of recycled raw materials, including regenerated bitumen from old roof coverings and obsolete stock. The high quality reinforcing carrier is also manufactured using recycled polymers. This results in a considerable reduction in the ecological foot print of Nuralite 3PM Pure White.

4. The production of Nuralite 3PM Pure White is powered by 100% green energy, resulting in a significant reduction of CO₂ emissions.

5. Nuralite 3PM Pure White incorporates "prevENT" graphite technology, which is resistant to the incipient spread of fire and complies with the highest European fire standards. The expandable graphite crystals are applied to the polyester composite carrier in the factory, ensuring outstanding fire retarding performance and ultimate peace of mind.

6. Nuralite 3PM Pure White is a roofing membrane with a proven durability of +30 years. (3) From a waterproofing perspective the composition of the sheets is largely unchanged from Nuralite's market leading Nuralite 3PM range.

Technical specifications (average values)

▶ Tensile strength (U.E.A.t.c.):	MD	775
	TD	600
▶ Elongation at break (U.E.A.t.c.):	MD	25%
	TD	35%
▶ Low temperature flexibility (U.E.A.t.c.):		-15%

Dimensions

▶ Thickness:	4 mm
▶ Length:	7.5 m
▶ Width:	1 m
▶ Surface:	7.5 m ²
▶ Average weight:	43 kg

Things to consider

This brochure must be read in conjunction with the standard Nuralite 3PM technical brochure. All the same restrictions and considerations apply.

A bead of bitumen must exude from all lap joints to ensure a seal. This affects the appearance of the roof but is an excellent way to have confidence in the waterproofing system

To the best of our knowledge, the information in this brochure is accurate at the time of printing. Nuralite Waterproofing Ltd reserves the right to alter information, formulation or parameters at any time without notice.

3. BDA: rapport08-B-0035

Nuralite Waterproofing Ltd

53A Victoria Street, Onehunga, Auckland 1061
Ph 09 579 2046 Fx 09 579 5136
E info@nuralite.co.nz

