



Green roofs or living roofs are an innovative and celebrated feature of sustainable design. The Nuraply 3PG membrane provides the waterproofing layer in any green roof design.

Nuraply 3PG is specifically designed for green roofs as it is impregnated with an anti-root additive to stop plant roots from damaging the membrane. It also has a smooth surface to ensure waterflow is unimpeded by sediment or aggregate chips.

It is fully compatible with the rest of Nuraply 3PM membrane range and can be used in collaboration with various living roof build-ups.

We also suggest Nuraply 3PG for Ballast or Brown Roofs as they can become Green Roofs over time, and for tanking situations where gardens or trees will be close to the building.

The cap sheet is Nuraply 3PG and the preferred base sheet is Nuraply 3PV-SA. The system is suitable for installing over plywood, concrete or Nuratherm Insulated roof substrates.

Green roofs provide both design functionality and an aesthetic space that softens the urban environment. Useful in creating a building that blends into the landscape or replacing areas predominantly using concrete and asphalt.

They significantly increase the life of the waterproofing membrane, protecting it from UV degradation, physical damage and the extremes of climatic conditions.

BENEFITS:

- Environmental merit through habitat creation and stabilised building performance.
- Increases life of waterproofing membrane.
- Improves acoustic & thermal properties of building.
- Provides a natural environment space for recreational & leisure purposes.
- Rainwater retention in the roof reduces demand on stormwater networks

1° GUARANTEE

With **CODEMARK Certification**, **Nuraply 3PG GREEN ROOF SYSTEM** can be installed on substrates with falls as low as 1 degree.

BUILDING CODE VERIFICATION

Nuraply 3PG carries a CodeMark Certificate. CodeMark is a product certification system administered by the Ministry of Business Innovation and Employment (MBIE). It must be accepted by Councils so long as the application is designed and used within the scope of the CodeMark certificate.

WARRANTY

Nuralite warrants Nuraply 3PG against materials defects for 20 years from the date of installation. The warranty must be applied for at the completion of the job. For this extended warranty to remain current the customer must maintain the roof and have it inspected every five years by a qualified Nuralite applicator.

The workmanship is covered by a separate workmanship warranty issued by the applicator. Nuralite will inspect the completed job if requested.

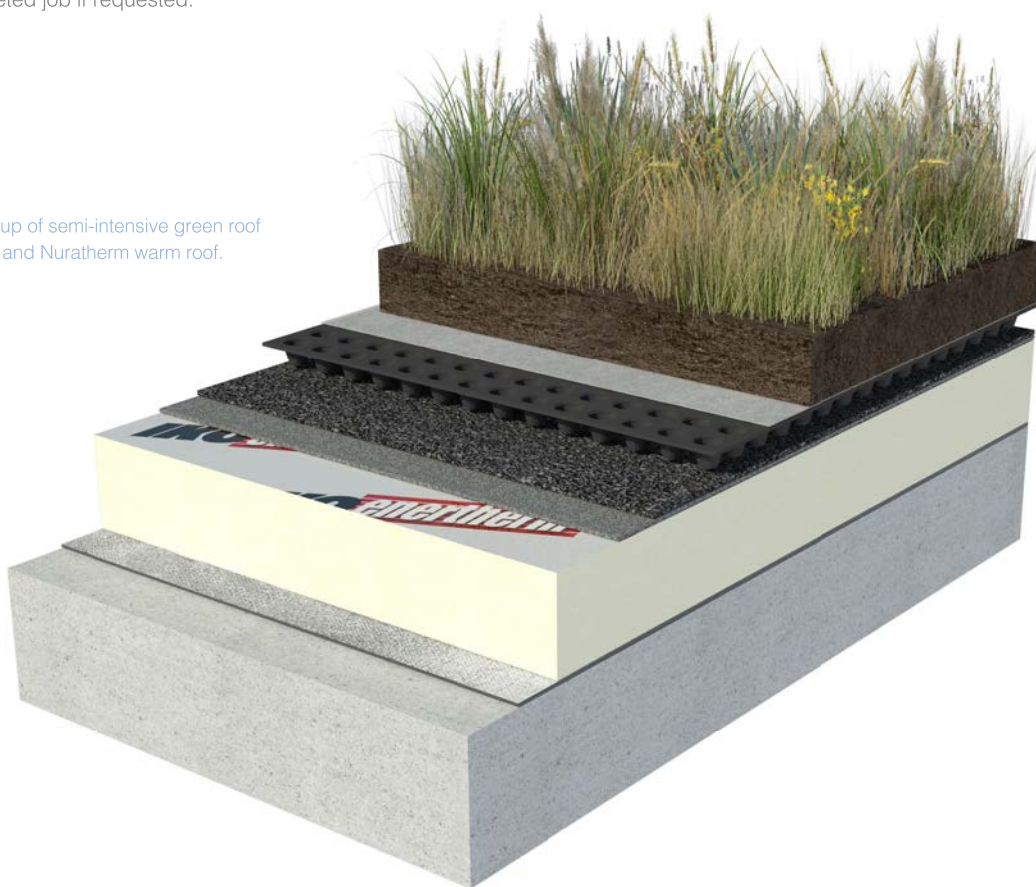
UV PROTECTION

The green roof build-up will protect the roof membrane beneath from the extremes of the elements, specifically UV. A green roof membrane can expect improved longevity when compared to a UV-exposed membrane roof.

WARM OR COLD ROOF

Nuraply 3PG is suitable for installing your green roof as a cold roof, or over the Nuratherm warm roof as a fully insulated substrate. Nuratherm allows the extra option of a profiled metal substrate.

» **GREEN ROOF.** Typical build-up of semi-intensive green roof over Nuraply 3PG membrane and Nuratherm warm roof.



SCOPE

THINGS TO CONSIDER

- Because of the extra weight of a green roof, structural engineering design is important.
- Drainage layers and outlet details must be carefully considered to ensure roof drainage works effectively and green roof does not flood.
- Always allow a 300mm wide barrier of stones or pavers around the edge of the green roof, and adjacent to penetrations and outlets.
- If any aspect of Nuraply 3PG is unclear, do not hesitate to consult your local Nuralite technical advisor.
- The growing medium and plants must be carefully chosen to ensure the system flourishes. Consult expert advice in supply of living roof material and seek advice on irrigation to suit local conditions.

APPLICATORS

All of our authorized applicators have been trained at our premises followed by on-site training. Most applicators have been working with our systems for many years. We work closely with applicators to ensure quality standards are maintained.

Our applicators install the waterproofing system and drainage layer. The landscape aspects should be performed by skilled professionals.

SUBSTRATE	Plywood	Concrete	Existing NURALITE	Concrete with Tapered Boards or Flat Enertherm	Plywood with Enertherm	NPM900 Metal tray with Enertherm
Recommended Design Fall (excluding gutters)	1:40	1:60	1:60 Confirm no ponding areas	1:60	1:40	1:40
Comments	Using 17mm (roofs) or 21mm (decks) plywood, rafters at 600 centers, nogs at 600 centers	Create required slope with a screed. Wait for concrete and screed to cure	Confirm substrate is sound	Nuralite to assist with tapered board layout	Create required slope in the plywood	Create required slope in the NPM900



GREEN ROOF BUILD-UP

A successful green roof requires that the plants stay alive, while the building stays dry. From the bottom up, the layers of a typical green roof are:

Roof Substrate

Often a green roof is on a concrete substrate, though it could be built using plywood or if using Nuratherm warm roof, it can be on a trapezoidal profiled metal substrate. The structure must be designed to accommodate the additional weight of a green roof.

Enertherm PIR Insulation

Enertherm PIR insulation board is the key element is the Nuratherm warm roof system. It can also support the weight of a green roof and will provide excellent thermal performance. A warm roof also means absence of condensation in the roof space and so does not require roof space ventilation.

Enertherm PIR insulation can be installed over plywood, concrete or profiled metal substrates.

Nuraply 3PG Membrane

Nuraply 3PG is a two-layer membrane system. This offers double the security and optimum confidence in watertightness which is imported once the green roof is in place. The base sheet is Nuraply 3PB, or 3PV-SA depending on the substrate.

The cap sheet is Nuraply 3PG. This membrane is impregnated with an anti-root additive to stop plant roots from damaging the membrane.

Heavy duty Polyethylene

Heavy duty Polyethylene This layer is designed to protect the membrane from damage as workers install the green roof. The sheets are taped together to provide an additional root barrier layer.

Drainage Board and Geotextile Filter

It is important not to install the growing medium directly onto the membrane or HDP. Both a drainage board and a geotextile filter are required first. The drainage board creates the free drainage space for excess stormwater to find the gutters and outlets. It can also store some water to support a green roof during dry spells.

The geotextile filter is laid above the drainage board to prevent the soil from clogging up the free draining zone.

Growing Medium and Plants

Once the Nuraply 3PG is drained and protected, it is important that the correct amount and type of growing medium is used to ensure a healthy plant population.

We recommend clients consult experienced green roof installers to ensure suitable plants, growing medium and irrigation are chosen for the specific roof and geographic location.



TECHNICAL INFORMATION

A comprehensive set of design details and specifications are available at www.nuralite.co.nz

Nuralite technical advisors are all very experienced and willing to help either on the phone, in your office or on site. Call 09 579 2046 or 0800 Nuralite (0800 687254).

DESCRIPTION – NURAPLY 3PG

Nuraply 3PG is a two-layer system. The base sheet is Nuraply 3PB-SA, because it is fully bonded to the substrate.

The cap sheet is Nuraply 3PG. This membrane is specifically designed for Green Roofs as it is impregnated with a herbicide to discourage roots from attacking the Nuraply 3PG sheet. It also has a smooth surface to ensure waterflow is unimpeded by sediment or aggregate chips.

COMPOSITION

- Reinforcement: non-woven polyester 180 g/m2.
- Coating mass: Plastomer bitumen, consisting of ±70 % bitumen and ±30% atactic polypropylene (APP) with addition of a root rejecting element.

»» Technical specifications (average values).

	CAPSHEET	BASESHEET			
SUBSTRATE		Plywood		Concrete	
PRODUCT	NURAPLY 3PG	NURAPLY 3PB	3PBSA	NURAPLY 3PV	3PVSA
Tensile Strength (U.E.A.t.c)	L: 900 N T: 650 N	L: 650 N T: 500 N	L: 700 N T: 500 N	L: 900 N T: 550 N	L: 700 N T: 500 N
Elongation at Break (U.E.A.t.c)	L: 45% T: 45%	L: 45% T: 45%	L: 35% T: 35%	L: 45% T: 45%	L: 35% T: 35%
Resistance to Heat (U.E.A.t.c)	≥ 140°C				
Low Temperature Flexibility (U.E.A.t.c)	-8°C				
Dimensional Stability	0.2%				
DIMENSIONS					
Thickness	4 mm	3 mm	3 mm	3 mm	3 mm
Length	7.5m	10 m	15 m	7.5 m	10 m
Width	1 m	1 m	1 m	1 m	1 m
Surface	7.5 m2	10 m2	15 m2	7.5 m2	10 m2
Average Weight	43 kg	36 kg	32 kg	32 kg	32 kg

Root Resistance according to DIN 4062.

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