

# Technical Data Sheet

## SOPRASUN 4 GARDEN (SOPRAGUM)



### DESCRIPTION

**SOPRASUN 4 GARDEN (SOPRAGUM)** is a waterproofing membrane composed by APP modified bitumen with a composite polyester reinforcement which results in a better dimensional stability and mechanical resistance. The reinforcement is impregnated with an APP compound. The homogeneity between the covering mass and the impregnation compound results in an extremely high resistance to delamination. The coating mass and the reinforcement contain a root-repellent substance to prevent roots to perforating the waterproofing system the upper side is finished with sand/talcum. A torch-on film protects the lower side (torch-on method).

### MANUFACTURE OF MATERIALS

All materials shall be produced supplied or specified by Allnex New Zealand Ltd. To avoid incompatibility of component materials it is essential that Allnex technical staff be consulted before any product other than those specified is used.

### SYSTEM DESCRIPTION

Soprasun 4 Garden is available with a root-repellent finish. The system may be installed as follows:

#### Double Layer only

**Soprasun 3** torched directly to substrate. **Soprasun 4 Garden** is torched directly onto the prefixed Soprasun 3. *Complies with Membrane Group Code of Practice.*

Soprasun 4 double layer is elastomeric and will elongate or contract with minor building movements and stay flexible over a long period of time. This will provide positive, long term waterproofing durability

### SURFACE PREPARATION

It is the contractor's responsibility to inspect all areas which are to receive the waterproofing membrane and report any unsatisfactory conditions to the main contractor. Listed below are detailed specifications for preparing various substrates. The surface to be waterproofed must be clean and sound. Remove all dust, dirt, laitance or any other contaminants which may hinder adhesion of the membrane.

### VENTILATION

It is important that membrane roof structures are vented to prevent condensation build up and subsequent damage. Ventilate between roofing framing and to the exterior. Specific designs and advice are available. Ridge vent caps are an effective solution.

### ROOF SLOPE

This Soprasun double layer roofing system will fully waterproof a flat roof. Allnex Soprema membranes are BRANZ appraised to 1:30 on plywood, 1:60 on concrete substrates and 1:40 on decks. (However the New Zealand Building Code requires a 1.5° slope. 1:40). Very low pitched roofs will pond unless care is taken with roof substrate preparation and attention to detail is applied to the sheet layout to prevent water ponding behind laps. In roof gardens with flat bases a chased channel will assist in preventing water build-up. The Jardin system will waterproof water standing areas.

### CONCRETE

Any hollows shall be filled and ridges ground smooth (use Allnex FLC). Surface must be free of any spalled areas, loose aggregate and sharp protrusions. Outside corners must be free of sharp edges. Substrate must be dry. The use of Allnex Aquaguard 101 is an option to isolate damp concrete. Aerisol Flam ventilation sheet is recommended (with vents) to control moisture being emitted from the concrete substrate. This is applied under the membrane sheets. Control joints shall be treated as specified by architect, engineer and approved by membrane manufacturer. For suggestions see "detailing" on Allnex website.

### BLOCKWORK

Soprasun 4 Garden system may be applied to smooth concrete block substrates. Any pointed blockwork must be flushed out.

If blockwork is rough a well adhered coat of Allnex FLC may be used to achieve a smooth substrate.

## VENTILATION

Ventilation to the full roof cavity must be provided to prevent moisture build up in the cavity. The vented area should be below the ply but above any insulation. Side vents on opposite sides of the building are preferred with full cross ventilation designed into the structure. Distances exceeding 10m should have separate roof vents.

## OTHER

Any other substrate or areas with existing waterproofing membranes please refer to Allnex New Zealand Ltd for advice.

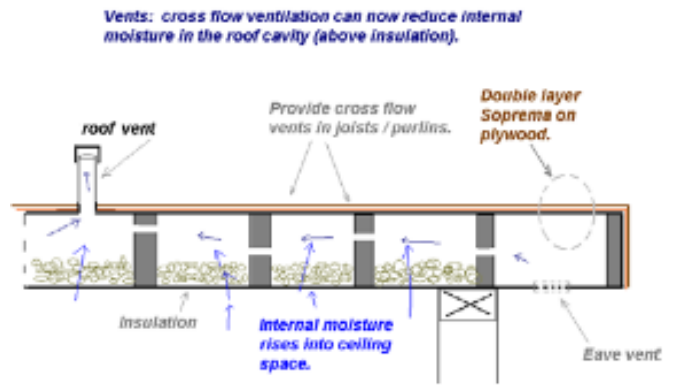
## APPLICATION

All products shall be applied by approved contractors.

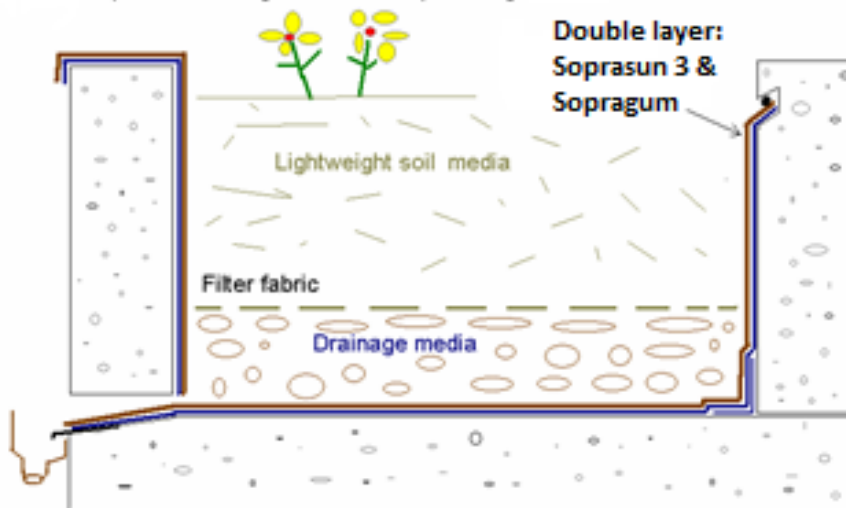
## DOUBLE LAYER INSTALLATION

Apply Elastocol 500 at the appropriate spread rate as per the relevant technical data sheets. To all interior and exterior corners hot torch apply a 100mm Soprasun 3 fillet. Hot tool chamfer all edges. Install expansion joints (in the ply) to allow for plywood movement. The position of the joints will be specified by the roofing engineer. An Allnex double layer roofing system will tank a fully flat roof (0° pitch). (However the NZ Building Code does stipulate a minimum 1.5° (1:40) roof pitch.) Allnex state that a double layer system is waterproof and will hold and resist ponding water. Protrusions/Vents: Install and/or waterproof these as per Allnex detailing. Ensure double layers (minimum) of membrane are installed. To main roof area hot torch apply a layer of Soprasun 3 with 75mm wide side laps and 100mm end laps. Hot tool chamfer all edges. To parapets and upstands hot torch apply Soprasun 3 extending lap over main roof areas by at least 75mm. hot torch apply second layer of Soprasun 4 Garden to first layer ensuring that all laps are staggered. Hot torch apply second layer of Soprasun 4 Garden to all parapets and vertical upstands extending laps over main roof area at least 100mm. Any terminations to vertical surfaces are to be finished under a flashing which is mechanically fixed and sealed with a polyurethane sealant.

**Protection:** Roof garden membranes (Sopragum) should be protected from physical damage by the installation of protection sheets, fibre cement or polystyrene. Etc. The Sopragum will not allow root penetration but it must be protected from damage during gardening. The contract should clearly outline the responsibilities of the waterproofer and the garden installation team.



## Soprema Roof garden Waterproofing



## DETAILS

Detail for upstands, penetrations, gutters, inlets, outlets etc are on our website. The details are all compliant with E2 AS1 (detail sections 8.5.) however the Allnex membrane system is in double layer form.

## WARRANTY

A warranty of 20 years is applicable to double layer Soprasun membrane systems. This is in excess of the 15 year warranty required by law.

This warranty covers the performance of the membrane itself and does not warrant against excessive building movement. Only double layers systems are covered by the warranty. This applies to new work in accordance with the Building Code and E2/AS1.

## MAINTENANCE

Roof gardens and planters are subject to damage from gardening work. These damages must be avoided. Regular inspections are to be carried out to identify any areas of damage. These are to be repaired by apply a patch of Sopragum.

## PRODUCER STATEMENT

Soprasun 4 Garden System is provided by Soprema as suitable as an exterior roof cladding in the New Zealand environment. As such it is compliant with the New Zealand Building Act. A 20 year warranty is supplied. Double layer Soprasun 4 Garden is an alternative solution with the requirements of E2/AS1 July 2005.

Allnex New Zealand Ltd are a founding member of the Membrane group Code of Practice for Torch-on membranes.



## SPECIAL INDICATIONS

### Hygiene, health and environment:

The product does not contain any substance likely to be detrimental to health or to environment and complies with generally admitted Health and Safety Requirements. For more information, please refer to relevant Safety Data Sheet.

### Quality control:

**SOPREMA** has always attached the highest importance to Quality Control.

For this reason, we operate an independently monitored Quality Assurance System in compliance with **BS EN ISO 9001:2000**, certified by **BSI Management System**.

## PACKAGING

	SOPRAGUM GARDEN 4 C	
	C1	C3
Dimensions of the roll (m) Upper side sand/talcum (TF)	10 x 1	10 x 1
Weight of the roll (kg) Upper side sand/talcum (TF)	42	42
Number of rolls per pallet Upper side sand/talcum (TF)	23	23

## COMPOSITION

		SOPRAGUM GARDEN 4 C	
		C1	C3
Membrane thickness on selvedge		4 mm	10 x 1
Reinforcement composite polyester (g/m <sup>2</sup> )	MDV	200	250
Coating mass		APP + root-repellent substance	APP + root-repellent substance
Upper side		Sand/talcum	Sand/talcum
Lower side		PE film	PE film

MDV = average value / MLV = minimum value

## CHARACTERISTICS

		SOPRAGUM GARDEN 4 C	
		C1	C3
Tensile strength: L (N/5cm) (UEatc)	MDV	800	1300
Tensile strength: T (N/5cm) (UEatc)	MDV	700	1100
Elongation at break: L (%) (UEatc)	MDV	45	45
Elongation at break: T (%) (UEatc)	MDV	45	40
Dimensional stability (%) (UEatc)	MLV	0.3	0.3
Cold flexibility (°C) (UEatc)	MLV	-15	-15
Softening point (°C) (UEatc)	MLV	140	140
Puncture resistance: L (N)	MLV	200	300
Puncture resistance: T (N)	MLV	200	300

MDV = average value / MLV = minimum value

## CERTIFICATIONS

### BRANZ Appraisal No: (819) 2014

Soprasun APP Waterproofing Membranes have been assessed as roof waterproofing membranes on buildings within the following scope:

- The scope limitations of NZS 3604:2011 and NZBC Acceptable Solution E2/AS1, Paragraph 1.1; or,
- The scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area when subject to specific structural design; and,
- Situated in NZS 3604:2011 Wind Zones, up to and including Extra High; and,
- With substrates of plywood or suspended concrete slab.

### New Zealand Building Code (NZBC)

These products will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- Clause B1 Structure: Performance B1.3.1, B1.3.4, B1.3.4(b), B1.3.4(c), B1.3.4(d), B1.3.4(e)
- Clause B2 Durability: Performance B2.3.1, B2.3.1(b)
- Clause E2 External moisture: Performance E2.3.1, E2.3.2, E2.3.7, E2.3.7(b), E2.3.7(c)
- Clause F2 Hazardous building materials: Performance F2.3.1

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Replaces: New



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