

SOPRAGUM GARDEN PLUS 4

Root resistant APP-modified bitumen waterproofing membrane

January 2024

DESCRIPTION:

SOPRAGUM GARDEN PLUS 4 is an APP-modified bitumen waterproofing membrane integrated with anti-root additives designed for green roofing, planter boxes and below grade applications.

SOPRAGUM GARDEN PLUS 4 is reinforced with a non-woven polyester combined with fibreglass. The composite reinforcement conveys good mechanical characteristics, excellent dimensional stability, and elastic performance.

SOPRAGUM GARDEN PLUS 4 top surface is coated with anti-adhesive amorphous sand; bottom surface is covered with a thermofusible plastic film.

APPLICATION METHOD:

SOPRAGUM GARDEN PLUS 4 can be fully heat-welded using a propane torch or MINI MACADEN.

INSTALLATION PROCEDURE:

SUBSTRATE

- No work should be started until all surfaces are smooth, dry, and free of ice, snow or any other substance that may prevent the membrane from adhering properly.
- Substrate must have a minimum 1% gradient to ensure that water drains to drainage outlets.
- Do not install heat welded membranes directly onto combustible substrate.
- Concrete substrate must be fully cure before application of the membrane.
- Concrete substrate must have a Concrete Surface Profile (CSP) between 3 and 6 as per International Concrete Repair Institute.
- Adhesion test is recommended prior to installation of membrane.
- Commencement of installation shall be taken as acceptance of the substrate by the Applicator.

PRIMING

- When installed as top layer over base sheet membrane, a primer is not required.

HEAT WELDING

- Unroll membrane sheets onto the roof surface.
- Starting at the low point of the roof, lay out the membrane to ensure the plies are installed perpendicular to the roof slope, shingled to prevent back-water laps.
- Ensure specified side-laps and end-laps are maintained. End-laps should be staggered 1 metre apart.
- As the membrane ply is unrolled, apply heat to the underside of the ply until the thermofusible film melts sufficiently for full adhesion to the substrate, and full adhesion between plies.
- For hand-held roof torches, continuously move the torch side-to-side across the underside of the roll to melt the bitumen while continuously unrolling sheet. While unrolling and heating the sheet, ensure approximately 6 to 12 mm of hot bitumen flows ahead of the roll, and there is 3 to 6 mm bleed out at all laps. Ensure all side-laps are fully adhered and sealed watertight.
- Adjust application methods to accommodate varying environmental conditions as necessary to achieve the desired results.
- At the 150 mm end-laps ensure a fully adhered watertight seal. Melt the thermofusible film or embed granules and remove other membrane surfacing, where present, using a torch or hot-air welder.
- All penetrations and upturn details should be waterproofed as per SOPREMA Installation Guides and detail drawings.



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PACKAGING:

SPECIFICATIONS	SOPRAGUM GARDEN PLUS 4
Thickness	4 mm
Roll dimensions	10 m x 1 m
Roll weight	45 kg
Rolls per pallet	20

PROPERTIES:

Properties	Test Method	SOPRAGUM GARDEN PLUS 4
Abrasion resistance*	AS 1580.403.2	PASS
Bond strength to concrete	ASTM C794	27.4 N/2.5 cm
Cyclic movement	CSIRO Moving joint test (B)	PASS
Dimensional stability	ASTM D5147	MD: -0.10% : CD -0.19%
Elongation at break	ASTM 4654.1	37%
Field seam strength	ASTM D1876	1.2 (±162) N/m
Heat aging	AS 4654.1 (AS 1145.3)	PASS: no visual change
Ultraviolet resistance*	AS 4654.1 (AS 1145.3)	PASS: no visual change
Tensile strength	ASTM D5147	740 N/5CM
Durability	AS 4654.1	PASS
Watertightness	EN 1928-B:2000	> 200 kPa
Water vapour transmission rate	AS 4654.1	0 perm**

(All values are nominal)

*Applicable only to self-protected ** The results values are below the variation of the equipment. We consider that the sample have no water vapour transmission

SCOPE OF USE:

SOPRAGUM GARDEN PLUS 4 is used as root-resistant cap sheet in the SOPRASUN PLUS and SOPRATHERM Green Roof & Deck waterproofing systems. The product, which can be used in vertical or horizontal applications, is torch-applied over an approved system base sheet to form a two-layer waterproof membrane designed for green roofs, roof gardens and plaza decks, planter boxes and courtyards. It is suitable for new builds and refurbishments, residential and commercial construction, in any location and wind zone in New Zealand.

Suitable for other waterproofing applications where root resistance is required with written approval by Equus Industries Ltd.

CONDITIONS OF USE:

The membrane shall be used overlaid with an Equus approved drainage mat, loose laid to ensure no penetrations to the membrane, that ensures free water drainage and adds protection to the membrane.

The product must be installed by a Certified Equus Applicator. Verification of their status can be confirmed by a current applicator certificate or by contacting Equus Industries Ltd. Any installation must be done in accordance with the latest specifications and technical documentation, or with written approval by Equus Industries Ltd.

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BUILDING CODE COMPLIANCE:

B2 Durability - B2.3.1 (b), SOPRAGUM GARDEN PLUS 4 has a durability of at least 15 years, when installed with the correct specification, installation and maintenance. See BRANZ Appraisal 819.

E2 External moisture - E2.3.1, E2.3.2, E2.3.7 Test data, together with in-service history internationally, of the correctly installed SOPRAGUM GARDEN PLUS 4 membrane over correctly designed and constructed substrates, show that the membrane successfully resists the ingress of moisture. See BRANZ Appraisal 819.

F2 Hazardous building materials - F2.3.1 Well known experience with the type of materials used together with in-service history, show that SOPRAGUM GARDEN PLUS 4 complies with this performance requirement. Refer to SDS at www.equus.nz

SUPPORTING DOCUMENTATION:

Title (type)	Version	URL
BRANZ Appraisal No. 819	31 August 2022	https://www.equus.nz/content/reports/branz-appraisal-soprasun-819.pdf

STORAGE AND HANDLING:

Rolls must be stored upright, with the selvedge side on top. If stored outdoors, cover them with an opaque protection cover after removal of the delivery packaging.

WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
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MANUFACTURERS CONTACT DETAILS:

Manufacture location	Italy
Legal and trading name of manufacturer	Soprema New Zealand Limited
Manufacturer address for service	Level 3, Candida Building 4, 61 Constellation Drive, Mairangi Bay, Auckland 0630, New Zealand
Manufacturer website	www.soprema.com.au
Manufacturer email	info@soprema.com.au
Manufacturer phone number	+61 3 9221 6230
Manufacturer NZBN	9429050312962