

TECHNICAL DATA

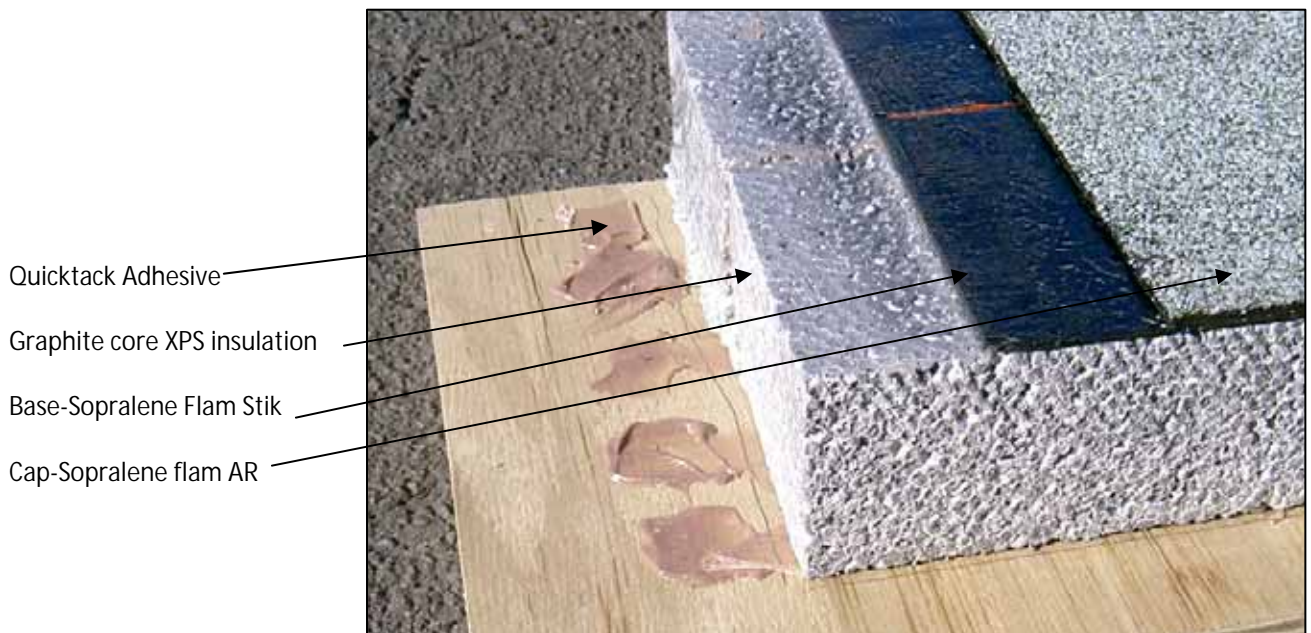
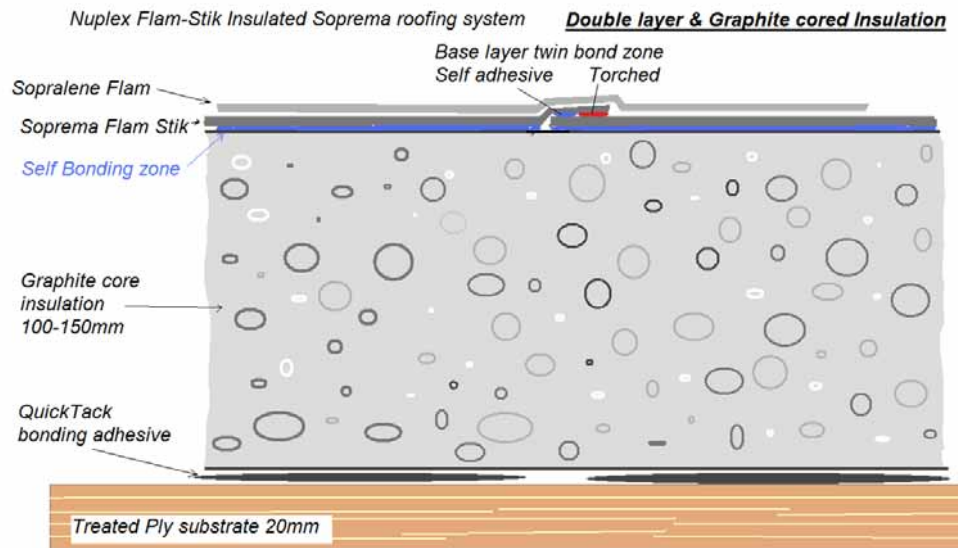
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MANUAL SECTION	ISSUE DATE	AUTHORISED	REPLACES	PAGE
Roofing	February 2010	PM	New	1 of 3

SOPREMA SOPRALENE FLAM STICK Graphite Core Insulating System

DESCRIPTION:

Sopralene Flam Stik is used to construct an insulated roof system consisting of a double layer membrane, self adhesive and then torch applied over Graphite core XPS insulation system for flat/low pitch roofs to achieve the required R-rating..



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Four component system details:

1. Durable polystyrene safe adhesive, Quicktack
2. Graphite Core XPS insulation (GCI)
3. Flam Stik base sheet. This employs a flame free, self-adhesive installation; but combines a torched edge for durability. Sopralene Flam Stik 2.5mm polyester/glass reinforced elastomeric bituminous based membrane.
4. The cap sheet is the highly flexible and durable SBS Sopralene Flam 180AR 4mm non-woven polyester reinforced elastomeric based membrane. This highly durable and flexible Sopralene Flam AR completes the installation.

Product	Quick tack	Graphite Core XPS	Sopralene Flam Stik	Sopralene Flam 180 AR
size	20lt pail	Many sheet sizes	1 x 10m	1 x 8m
Thickness	1m ² /lt min	To meet code & falls. Normally 90mm	2.5mm	4mm
Roll weight	n/a	22kg/m ³	31kg	38kg
Weight /m ² (installed)	0.4kg	2.2kg	3.3kg	4.9kg
Description	adhesive	insulation	base sheet	Cap sheet
Permeability to water	0%	Low	0%	0%
Light reflectance, RV	n/a		n/a	Low depending on colour

According to H1-Energy efficiency, the NZ Building code requirements for a Membrane roof on Plywood are:

Zone and R-rating to exceed	Min. Thickness of Graphite Core required.
Zone 1 2.9	90mm
Zone 2 2.9	90mm
Zone 3 3.3	105mm

This system exceeds the requirements in all zones.

Benefits:

- Gives required roof R-value.
- Provide sound reduction (rain noise).
- Low roof weight.
- No wind leakage
- Reduces risk of joint popping. Polystyrene sheets insulate against ply and structure movement.
- Self adhesive first layer. Easy application.
- Fast, torch applied second layer.
- Graphite Core XPS has a higher insulating value than normal XPS. This system is based on product and information from a NZ manufacturer on Black pearl Neopor which also contains a fire retardant.
- Based on NZ sourced sheet which allows for more flexible building times and lowers transportation cost of pre-expanded insulations. This allows exact site measurement prior to installation.
- Roof falls alls can be created with the Graphite core slabs. This allows the designer to have flat plywood but create the required fall in the insulation. Also drains and features.

Flexible

- Simple application
- Fully bonded
- Sopralene systems are SBS rubber modified for long term flexibility and durability. Ability to take repeated stress and strain without peaking.

RECOMMENDED USES:

- Double layer flexible sheet waterproofing on Flat and or low pitch roofs and up to 20% pitch.
- Over concrete and well fixed plywood.
- Post applying insulation to un-insulated roofs

LIMITATIONS

- This system is suitable for mild climates only where there is no risk of firm ice or heavy snow. In these areas use **Graphite core PLUS** which includes a vapour barrier under the insulation and the system is mechanically fastened.
- Not a trafficable roof. Ie for general living purposes.
- Take great care with roof penetrations; avoid if possible.
- Do not allow PVC coated electrical cables to come into contact with this insulation. Use PE tapes or special conduits.

SURFACE PREPARATION:

Concrete

Allow full 28 days cure time after concrete pour. U3 concrete finish specified . Ensure the surface is dry. Prime with Neoprime.

Plywood

Plywood must comply with AS/NZS2269 for structural plywood. Plywood must be minimum 17mm, H3 treated CCA (waterbased treatment). Plywood must be fastened by corrosion resistant screws (preferably 50mm stainless screws) at 150mm centres around the perimeter and 200mm centres within the sheets as per E2/AS1. Frame center spacing should be at a maximum of 600mm. Center nog joists at 1200mm. All sides and/or ends must be noggged even if T&G ply is used. Plywood sheets must be staggered. Refer to plywood suppliers charts for alternate roof usage/slope directions.

All fastenings must be countersunk. All joints must be left with an even uniform finish. Ply upstands must be strong and sound and be well supported and strengthened. Use epoxy and fibreglass if necessary to ensure adequate strength. Pre-prime with Neoprime.

ROOF SLOPE

This Soprasun double layer roofing system will fully waterproof a flat roof. (However the New Zealand Building Code, E2/AS1, requires a 1.5° slope. 1:40). Some local bodies specify a minimum 2° slope. 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 minimise water ponding behind laps.

The engineering designer or plywood suppliers structural specification for plywood installation shall override the Nuplex specification.

Install expansion joints in the plywood structure to allow for plywood movement. Plywood roof structures tend to move in sections (or "rafts"). Form joints in natural areas where movement is likely to occur. Nuplex provide control joint detailing. Roof runs (on plain flat structures) longer than 15m will require control joints.

VENTILATION – the need for roof space ventilation is to be specified by the designer; it depends on the design.

This system is a warm roof and the need for ventilation is minimised. As the insulation is above the space above the ceiling, ventilation is not normal needed.

Adhesive application:

The adhesive sets up and dries quickly. Avoid very hot and windy situations. Apply the adhesive in large spots at 150 x 150 mm centres and lay the sheet into the wet adhesive.

Work quickly. Weigh the sheet to ensure full surface area contact.

Practice this process on sheets & small pieces before commencing work. Caution: it can be deceptive about the applied adhesive rate. Use the recommended amount or more. Do NOT glue the sheet edges together.

INSULATION

Graphite Black Core XPS (2400 x 1200mm or other sizes) should be laid over the adhesive on the substrate butted and joints staggered. The minimum thickness is that which achieve the code. Above that the XPS can be cut to slope up to form falls or drains. Do not glue the edges together. The adhesive has only a short working

time. Take great care to ensure the adhesive is “active” and the sheet is bonded. If in doubt, remove and replace the sheet.

Take great care with roof penetrations; avoid if possible.

Do not allow PVC coated electrical cables to come into contact with this insulation. Use PE tapes or special conduits.

MEMBRANE:

Application

Ensure the site is clean and tidy and extinguishers and safety equipment is available and ready on the roof. Check the insulation is sound and complete prior to membrane installation

First Layer

Start from the lowest point and lay sheets with the correct overlap. Sopralene Flam Stick is bonded directly to the polystyrene by removing release paper from underside. The joints of the Flam Stick is achieved in two steps:

- a) Self-adhesive part is adhered to joining sheet. Using an edge roller ensure this bond is firm and complete.
- b) Hot-torch is used to adhere the second part of the joint. Use an edge lifting tool to fully torch this zone. Total joint width = 80mm. (Refer colour brochure.)

Take great care on the completion of the lapped-down edges on the first and second layers. It is best if stainless mechanical fastenings are used. This depends very specifically on the particular design. Consult with the builder, designer and Nuplex.

Second Layer -Sopralene Flam 180AR

Hot torch apply directly to the Flam Stick with 75mm side laps and 150mm end laps. Hot tool chamfer all edges.

Note: Stagger all joints between two layers to ensure joints do not line up.

Double check the roof for joint integrity. Complete all flashings. Complete all work and clean site.

WARRANTY:

Sopralene Flam Stick complies with the 15 year roofing requirement relating to E2/AS1. Material and specification warranty provided by Soprema. Additional joint warranties provided by the contractor and Nuplex Industries.