APPLICATION MANUAL VAPOUR- CONTROL LAYERS / BARRIERS

BUILDING TRUST

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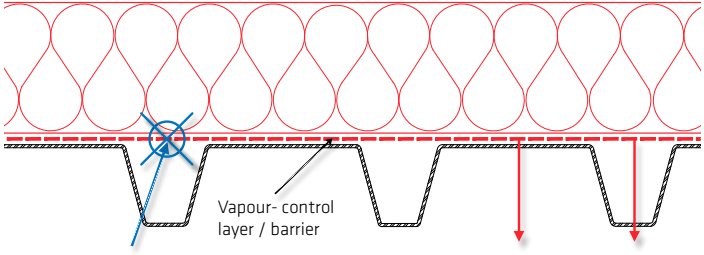
TABLE OF CONTENTS

FUNCTION OF VAPOUR- CONTROL LAYERS / BARRIERS

A vapour- control layer / barrier in a roof prevents moisture from entering and condensing inside, which helps maintain the roof's integrity and ensures the building remains airtight and energy-efficient. It acts like a barrier to protect against dampness, mold, and structural damage inside the thermal insulation.



- Stops condensation within the thermal insulation => no building damage (blue arrow)
- Airtight building => reduce energy consumption (red arrows)

TYPES OF PRODUCTS

Loose laid
- Sarnavap®-500 E
- Sarnavap®-1000 E
- Sarnavap®-2000 E

Self adhered
- Sarnavap®-5000 E SA
- Sarnavap®-5000 E SA FR
- Sikavap®-5000 E SK AL
- SikaShield® VB E71 PE SA 3 kg/m2

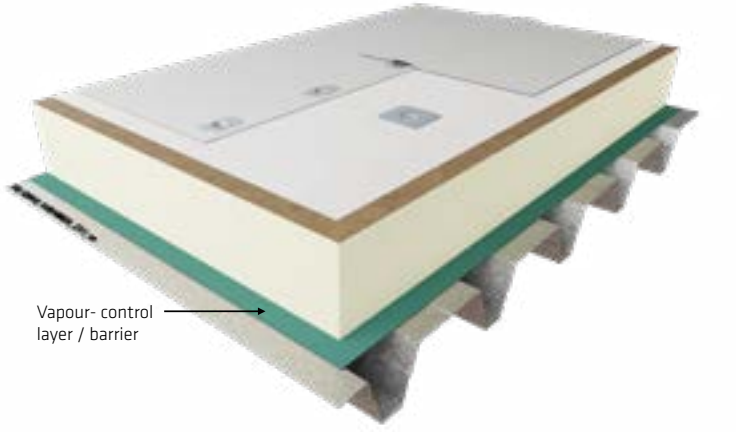
Torch applied
- SikaShield® VB P41 S 3 mm
- SikaShield® VB P21 T 3 mm
- SikaShield® VB P42 S 3 mm

APPLICATION / PRODUCT MATRIX

	Type of Application Vapour- Control Layers / Barriers		
Roof System / Substrate	**Loose laid**	**Self adhered**	**Torch applied**
Mechanically fastened on steel or wood deck	Sarnavap®-500 E Sarnavap®-1000 E Sarnavap®-2000 E	Sarnavap®-5000 E SA Sarnavap®-5000 E SA FR Sikavap-5000 E SK AL SikaShield® VB E71 PE SA 3 kg/m²	O
Mechanically fastened, adhered or ballasted on concrete deck	O	SikaShield® VB E71 PE SA 3 kg/m²	SikaShield® VB P41 S 3 mm SikaShield® VB P21 T 3 mm SikaShield® VB P42 S 3 mm
Adhered on steel or wood deck	O	Sarnavap®-5000 E SA	O

O not recommended

Positioning and type of vapour- control layer / barrier in accordance with local climate conditions, type of building and regulations and must be confirmed by external building physicist. All build-ups need to be wind uplift tested in accordance with the local regulations.



LOOSE LAID

Roll out and unfold the vapour control layer.

Overlap the vapour control layer (minimum 80 mm on the top crown of the corrugated metal deck).

Adhere Sarnavap® Tape F onto the lower vapour control layer.

LOOSE LAID

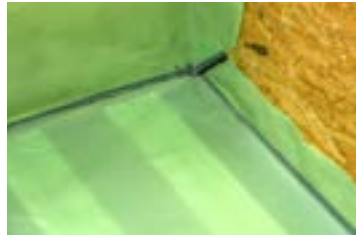
Roll down the overlapping vapour control layer firmly onto the Sarnavap® Tape F.

Apply the Sarnatape®-20 on the lowest level of the roof deck onto the parapet and remove the backing liner step by step. You need to apply a primer on your parapet substrate, in order to achive the neccessary adhesion.

Fold the vapour control layer to the parapet and press it down to the Sarnatape®-20 firmly. Make sure all connections are airtight.

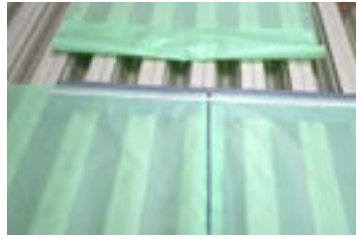
APPLICATION OF VAPOUR CONTROL LAYERS

LOOSE LAID



Make sure the Sarnatape®-20 is taped through the corner and you can create an airtight connection.

After the thermal insulation is applied, cut off the rest of the vapour control layer on top of the thermal insulation.



Underlay T-joints with a peace of support metal and apply the Sarnatape®-20.

LOOSE LAID

Roll down the vapour control layer onto the Sarnatape®-20 (supported by the metal piece).

All penetrations need to be sealed, using Sarnatape®-60

SELF ADHERED

Make sure that the substrate is clean, capable to bear loads, free of dust and grease and must not repel adhesives. Use Sarnafil® T Clean or Sika® Trocal Cleaner L-100 to clean it.

Important:
If a fully bonded roof build up is planed you will need to use a suitable primer (e.g. Primer 600). Make sure that primer is fully dry before continue.
You can find the required consumption rates for the different substrates in the product data sheet.

Roll out vapour barrier (without adhering) and adjust the vapour barrier parallel to the corrugated metal deck. Make sure it lays straight, nicely and even (no wrinkles).

SELF ADHERED

Roll back the vapour barrier, remove the backing liner and roll the vapour barrier down to the substrate. A second person should stand on the other end of the vapour barrier, so it is not moving.

Continue in the same procedure with the following vapour barrier. The minimum overlap is 75 mm.

In case you continue the application after a longer break (> six hours) clean the bottom vapour barrier with Sarnafil® T Clean or Sika® Trocal Cleaner L-100 before continuing.

APPLICATION OF VAPOUR BARRIERS

SELF ADHERED

Make sure that the vapour barrier and the overlapping of vapour barrier is properly adhered to the roof deck and water- and airtight. You can use a broom or a roller for that.

All joints need to be properly pressed down with a pressure roller.

Make sure the vapour barrier is adhered everywhere firmly to the substrate.

Use a squeezed fold for the corners.

SELF ADHERED

Make sure the vapour barrier is properly attached to the parapet. You need to apply a primer on your parapet substrate, in order to achive the neccessary adhesion.

Start application of thermal insulation.

Cut of the vapour barrier on top of the thermal insulation and remove the rest of the vapour barrier.

APPLICATION OF VAPOUR BARRIERS

SELF ADHERED

Apply a separate piece of the vapour barrier for the T-joint.

Apply the end of the vapour barrier to the separate vapour barrier piece.

Apply the adjoining vapour barrier (minimum 20 cm overlap).

SELF ADHERED

Cover the T-joint with an additional piece of vapour barrier (25 x 25 cm).

Finished T-joint.

In case you apply the vapour barrier between +5 °C and +10 °C, you need to heat up the overlap with a hot air gun (e.g. Leister hand welder) and roll down the overlap firmly to assure a proper bonding.

APPLICATION OF VAPOUR BARRIERS

SELF ADHERED

Detailing along external corners.

Detailing along round pipe penetrations.

TORCH APPLIED

Please refer to:
APPLICATION GUIDE – BITUMINOUS MEMBRANES

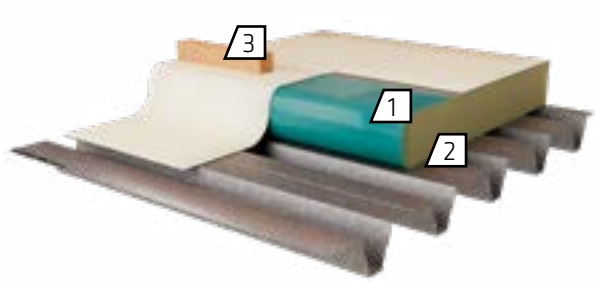
APPLICATION GUIDE
BITUMINOUS MEMBRANES

DAY JOINTS

Day joints protect flat roof areas against water penetration when work is interrupted.

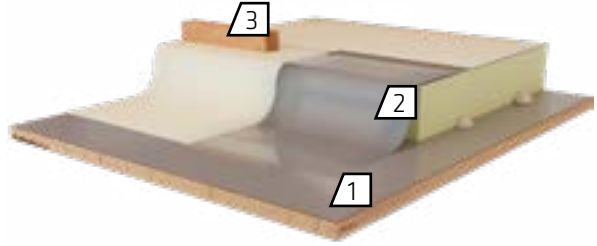
Day jonts with loose laid, vapour control layer on top of trapezoidal metal deck

- Adhere the loose laid, vapour control layer (1) to the trapezoidal metal deck using Sarnavap® Tape F (2).
- Fold back the loose laid, vapour control layer (1) over the thermal insulation.
- Put weight (3) on the roof waterproofing membrane.



Day joints with self adhered, vapour barrier

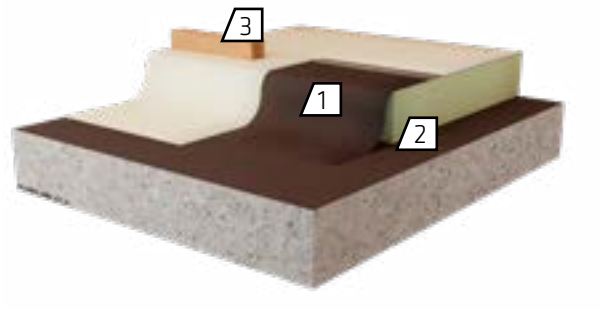
- Adhere self adhered, vapour barrier (1) to the roof deck.
- Adhere an extra strip of vapour barrier from the roof deck to the top of the thermal insulation (2).
- Put weight (3) on the roof waterproofing membrane.



DAY JOINTS

Day joints with hot applied, bituminous vapour barrier

- Torch apply, bituminous vapour barrier strip (1) to the installed vapour barrier (2).
- Put weight (3) on the roof waterproofing membrane.



Remove the torch applied, bituminous vapour barrier strip (1) on the next day before work starts.

NOTES

FURTHER ROOFING PUBLICATIONS AVAILABLE FROM SIKA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Certified Quality System ISO 9001/EN 29001 since 1986

USGBC MEMBER

SIKA SERVICES AG
Tueffenwies 16
CH-8048 Zurich
Switzerland

Contact
Phone +41 58 436 40 40
www.sika.com

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