APPLICATION MANUAL
Sarnafil® T / Sarnafil® AT

BUILDING TRUST

Disclaimer

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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GENERAL INFORMATION

SIKA ROOFING


CERTIFICATE

ROOFING TRAINING SIKA SERVICES AG

This is to certify that
FIRST NAME LAST NAME
successfully passed the
SARNAFIL FPO APPLICATION TRAINING

This comprehensive internship consisted of presentations and exercises (theory and practice), containing the following:

- Roofing system build-ups
- Application of FPO roofing membranes
- Surface preparation
- Detailing solutions

This welding training was held at Sika Services AG from October 04 to 06, 2025 in Sarnen, Switzerland.

Sarnen, October 2025

Andrej Sisolak
Head Target Market Roofing
Sika Services AG

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Head of Product Management Single Ply
Sika Services AG

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Sika Roofing puts great emphasis on application training and offers a wide range of expert training courses.
Only those who have successfully completed one of the Sika Roofing training courses and have regular, practical site experience are authorized to install Sika Roofing Systems.

- The applicator must load materials on the rooftop in such a manner to eliminate risk of deck overload due to concentrated weight.
- All new and temporary construction components, including equipment and accessories, must be secured in such a manner as to prevent wind uplift, blow-off, or subsequent roof or equipment damage.
- All surfaces to receive roof waterproofing systems must be dry. Should surface moisture occur, applicator must provide suitable drying equipment before installation begins.
- The applicator must conduct fastener pull-out tests to verify condition of the deck / substrate and to confirm expected pull-out values.
- Only as much of the roofing system installation can be made watertight each day, including flashing and detail work, must be installed.
- Sika membranes can become slippery when wet or covered with snow, frost, or ice. Appropriate safety measures must be implemented under such conditions.
- All waste material (scrap of roof waterproofing membranes, release liners, empty cans of adhesive) must be removed immediately and disposed according to applicable local regulation.
- Flammable adhesives and primers must not be stored or used near open flames, sparks, or excessive heat sources.
- The applicator must verify that all roof drains and drainage lines are functioning correctly and are free from blockages before installation begins. Applicator must report any such blockages in writing to the owner's representative for corrective action prior to the installation.
- The applicator must immediately stop work if any unexpected or concealed conditions are discovered and must immediately notify owner of such conditions in writing for correction at the owner's expense.
- Protective wear must be worn when using primers and adhesives, or other chemical products as required by jobsite conditions.

SIKA ROOFING

SUBSTRATES

REQUIREMENTS

TRAPEZOIDAL STEEL / METAL DECK
Country specific approved trapezoidal steel / metal deck must be used. The deck shall confirm a minimum quality of steel S 280 (280 N/m^2 tensile strength) according to local building code. The substrate does not provide a continuous supporting surface for direct membrane installation. Therefore it must be overlaid with mechanically fastened thermal insulation or coverboard.

STRUCTURAL CONCRETE, PRECAST / PRE-STRESSED PANEL DECK
A minimum concrete quality of C20/25 is required.
The surface must be even, smooth and sand free of any sharp protrusions or loose particles.

WOOD DECK (PLYWOOD / TIMBER)
Country specific approved wood deck must be used. The deck shall conform the requirements for fire performance and rot resistance. Wood deck shall be installed according to local building code.
The deck must be installed tightly with no gaps at butt joints and securely fastened.

SANDWICH PANEL
The panels must be installed without gaps at butt joints and securely fastened.

PREPARATION AND CLEANING

It needs to be ensured that different types of roof decks are secured to the structural framing according to local building code and in such a manner as to resist all anticipated wind loads in that location.

Prior and during application, all dirt, debris and dust shall be removed from surfaces either by vacuuming, sweeping, blowing with compressed air and / or similar methods.

Existing roof decks are likely require some level of preparation before commencing the installation of new roof waterproofing system, such as filling and levelling of any hollows, removal of blisters and cleaning of the surface. Cleaning may require careful use of a jet washer and brushes.

Roof surfaces shall be free of water, ice and snow.

If laying roof waterproofing membrane directly onto substrate, a levelling- and protection layer may be required.

VAPOUR- CONTROL LAYERS / BARRIERS

APPLICATION / PRODUCT MATRIX

	Type of Application Vapour- Control Layers / Barriers		
Roof systems and substrates	**Loose laid**	**Self adhered**	**Torch applied**
Mechanically fastened system on steel or wood deck	Sarnavap®-1000 E Sarnavap®-2000 E	Sarnavap®-5000 E SA Sarnavap®-5000 E SA FR SikaRoof® Vap 4000 E SA FR SikaShield® VB E71 PE SA 3 kg/m²	○
Mechanically fastened or ballasted system on concrete deck	○	Sarnavap®-5000 E SA SikaShield® VB E71 PE SA 3 kg/m²	SikaShield® VB P41 S 3 mm SikaShield® VB P21 T 3 mm SikaShield® VB P42 S
Adhered system on concrete deck	○	Sarnavap®-5000 E SA SikaShield® VB E71 PE SA 3 kg/m²	SikaShield® VB P41 S 3 mm SikaShield® VB P21 T 3 mm SikaShield® VB P42 S
Adhered system on steel or wood deck	○	Sarnavap®-5000 E SA SikaShield® VB E71 PE SA 3 kg/m²	○

○ Not applicable

Positioning and type of vapour- control layer / barrier in accordance with local climate conditions, building type 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 – VAPOUR CONTROL LAYERS

Sarnavap®-1000 E – 5.00 x 25.00 m
Sarnavap®-1000 E is an unsupported vapour control layer based on Polyethylene (PE).

Sarnavap®-2000 E – 4.00 x 25.00 m
Sarnavap®-2000 E is an unsupported vapour control layer based on Polyethylene (PE).

SELF ADHERED – VAPOUR BARRIERS

Sarnavap®-5000 E SA FR – 1.08 / 1.38 x 40.00 m
Sarnavap®-5000 E SA FR is a self-adhesive, multilayered, fire reduced, vapour barrier manufactured from polymer modified bitumen with a glass-fibre matt reinforcement and an aluminium foil top layer.

Note:
Not approved for fully adhered roof systems.

Sarnavap®-5000 E SA – 1.08 x 30.00 m
Sarnavap®-5000 E SA is a multi-layered, self-adhesive vapour barrier manufactured from polymer modified bitumen with a glass-fibre matt reinforcement and an aluminium foil top layer.

SikaRoof® Vap 4000 E SA FR – 1.50 x 50.00 m
SikaRoof® Vap 4000 E SA FR is a self-adhesive, multi-layered, vapour barrier manufactured with a reinforcement and an aluminium foil top layer. The bottom layer consists of a hot melt adhesive with a release liner.

Note:
Not approved for fully adhered roof systems.

SikaShield® VB E71 PE SA 3 kg/m² – 1.00 x 10.00 m
SikaShield® VB E71 PE SA 3 kg/m² is an SBS modified bituminous self-adhesive vapour barrier with a weight of 3 kg/m² and flexible at -25 °C. It is reinforced with aluminium foil and a dimensionally stable non-woven polyester inlay to provide an excellent barrier to the passage of the vapour. The top surface is covered with a polyethylene foil to bond the thermal insulation panels with molten bitumen or by mechanical fixation. The underside has a removable liner over the adhesive compound for easy application.

TORCH APPLIED – VAPOUR BARRIERS

SikaShield® VB P – 1.00 x 10.00 m
SikaShield® VB P is an APP is an APP modified bituminous vapour barrier, flexible at 0 °C. It is reinforced with aluminium foil and a dimensionally stable non-woven polyester inlay to provide an excellent barrier to the passage of the vapour. The top surface is covered with talc to bond the thermal insulation panels with molten bitumen or by mechanical fixation. The underside of the product has a burn-off film for easy torch application.

ACCESSORIES

Primer-130

DESCRIPTION
Primer-130 is a 1-part, ready to use, solvent-based primer for improving the adhesion properties of porous substrates before applying Sarnatape®-20.

USES
Substrate primer for Sarnatape®-20 butyl rubber adhesive tape.

Sarnatape®-60

DESCRIPTION
Sarnatape®-60 is a polyethylene reinforced fabric waterproof tape which is elastic and pliable. One side is coated in an acrylic resin adhesive which provides high durable adhesion.

USES
Taping of seams, connections, terminations and detailing of Sarnavap® vapour control layers (polyethylene).
All penetrations need to be sealed, using Sarnatape®-60

Sarnavap® Adhesive Tape F

DESCRIPTION
Sarnavap® Adhesive Tape F is a butyl rubber, double-sided adhesion sealing tape with a controlled stretch range.

USES
Taping lap splices in Sarnavap® vapour control layers (polyethylene) based material and for attaching Sarnavap® vapour control layers to smooth surfaces.

Sarnatape®-20

DESCRIPTION
Sarnatape®-20 is a butyl rubber, double-sided adhesion sealing tape with a controlled stretch range.

USES
Applied at airtight level for taping of seams, connections, terminations and detailing Sarnavap® vapour control layers (polyethylene).

PRIMER APPLICATION AND PRODUCTS

Primer to be used in combination with the application of vapour barriers if a fully bonded roof build-up is planned. Make sure that primer is fully dry before continuing. You can find the required consumption rates for the different substrates in the product data sheet.

The substrate must be uniform, firm, solvent resistant, smooth and free of any sharp protrusion or burrs, loose material, clean, dry, free of grease, bitumen, oil, paint coatings, dust and other materials which could reduce adhesion of the coating. If heavily contaminated or oiled, sheet metal decking must be cleaned with cleaner before applying the primer. Surface defects (> 5 mm) such as blowholes, voids, honeycombing, etc. must be filled / repaired with suitable Sika® repair mortars.

SikaRoof® Primer-600

DESCRIPTION / USES
Primer-600 is a synthetic rubber and resin based 1- part ready to use primer for improving the adhesion properties of specific Sarnavap®-5000 E SA vapour barrier.

Sika® Igolflex® P-01

DESCRIPTION
Sika® Igolflex® P-01 is a 1-part, polymer modified, ready to use bitumen emulsion.

USES
Primer for bituminous vapour barriers to improve the adhesion and substrate consolidation of:
- Concrete
- Mortar
- Masonry

PRIMER APPLICATION AND PRODUCTS

Sika® Igolflex® P-10

DESCRIPTION
Sika® Igolflex® P-10 is a 1-part solvent-based ready to use bituminous primer.

USES
Primer for bituminous vapour barriers to improve the adhesion and substrate consolidation of:
- Concrete
- Mortar
- Masonry
- Improves the adhesion to:
- Wood
- Metal

Sika® Igoflex P-10 EL

DESCRIPTION / USES
Sika® Igolflex® P-10 EL is a 1-part, elastomeric, solvent based ready to use bituminous primer. It penetrates the substrate to reduce porosity, improve adhesion and consolidates friable surfaces. These properties make it ideal for use with self-adhesive bituminous vapour barriers.

SikaShield® Primer W2

DESCRIPTION
SikaShield® Primer W2 is a 1-part, water-based and ready to use elastomeric modified bituminous primer. It improves the consolidation of the the substrate and the adhesion prior to the application of self-adhesive bituminous vapour barriers.

USES
SikaShield® Primer W2 is used as a primer before self adhesive bituminous vapour barriers installation for the following substrates:
- Concrete
- Mortar or other cementitious
- Masonry
- Wood

PRIMER APPLICATION AND PRODUCTS

Type of vapour barrier	Deck type / Type of primer to be used	SikaRoof® Primer-600 (solvent based)	Sika® Igoflex® P-01 (water based)	Sika® Igoflex® P-10 (solvent based)	Sika® Igoflex® P-10 EL (solvent based)	SikaShield® Primer W2 (water based)
Sarnavap® 5000 E SA FR	Wood deck (plywood / timber)					
	Concrete deck					
	Trapezoidal metal / steel deck					
Sarnavap® 5000 E SA	Wood deck (plywood / timber)	●				
	Concrete deck	●				
	Trapezoidal metal / steel deck	●				
SikaRoof® Vap 4000 E SA FR	Wood deck (plywood / timber)					
	Concrete deck					
	Trapezoidal metal / steel deck					
SikaShield® VB E71 PE SA 3 kg/m²	Wood deck (plywood / timber)				●	●
	Concrete deck				●	●
	Trapezoidal metal / steel deck				●	
SikaShield® VB P	Wood deck (plywood / timber)		●	●		
	Concrete deck		●	●		
	Trapezoidal metal / steel deck			●		

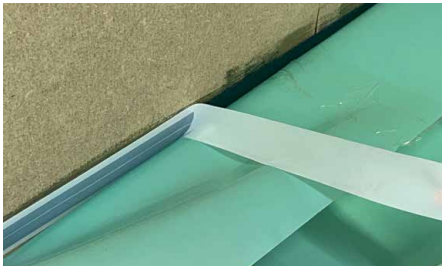
LOOSE LAID – VAPOUR CONTROL LAYERS

Precondition:
Roof deck shall be smooth, dry and strong enough to support foot traffic.

UPSTAND

1. Treat porous substrates with Primer-130 along tape bonding line on the lowest level of the roof deck.

2. Install Sarnatape®-20 and roll down tape using pressure roller.



3. Roll out and unfold the vapour control layer along the horizontal area. Vapour control layer must be carried up to the upper edge of the thermal insulation.

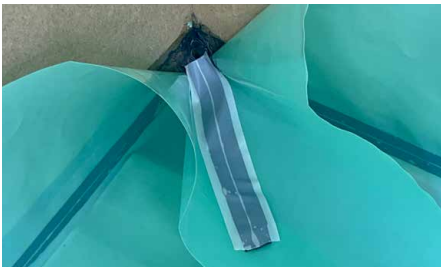
4. Remove release liner of Sarnatape®-20.

5. Adhere vapour control layer and roll down firmly onto Sarnatape®-20 using pressure roller.

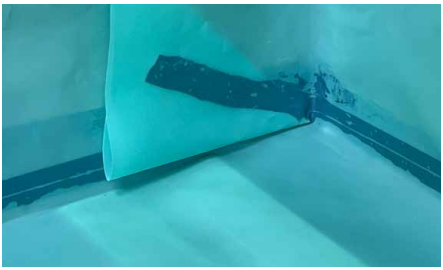
CORNER

6. Make sure the Sarnatape®-20 is taped through the corner to create an airtight connection.

LOOSE LAID – VAPOUR CONTROL LAYERS



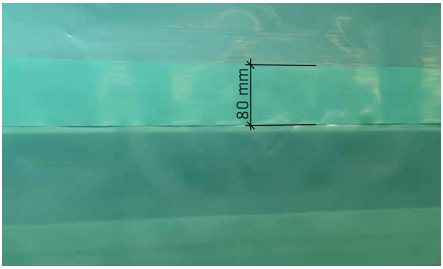
7. Install Sarnatape®-20 in the vertical direction on the vapour control layer.



8. Remove liner of Sarnatape®-20 and create an airtight pocket.

TERMINATION

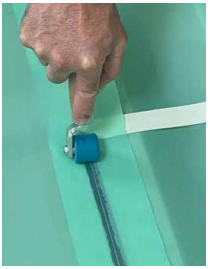
9. After the thermal insulation is applied, cut off the rest of the vapour control layer on top of the thermal insulation.



OVERLAP

10. Overlap the vapour control layer, minimum 80 mm. Overlap always on the top crown of the corrugated metal deck.

11. Install Sarnavap® Adhesive Tape F onto the lower vapour control layer. Tape connection always to be done on the top crown of corrugated metal deck.



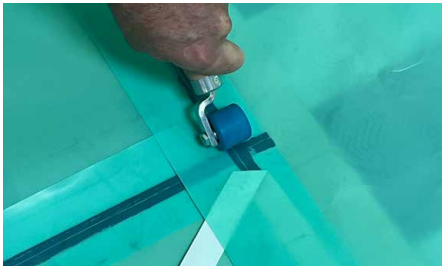
12. Roll down tape using pressure roller. Overlapping vapour control layers and remove release liner and roll down firmly onto the Sarnavap® Adhesive Tape F using pressure roller.

LOOSE LAID – VAPOUR CONTROL LAYERS

TRANSVERSE JOINT

13. Underlay T-joints with a piece of support metal. An airtight bond is achieved by trimming the edge of the upper vapour control layer at 45°.

14. Install Sarnavap® Adhesive Tape F and roll down tape using pressure roller.



15. Roll down the vapour control layer onto the Sarnavap® Adhesive Tape F.

16. Remove piece of support metal.

SELF ADHERED – VAPOUR BARRIERS

Precondition:
Roof deck must be dry, uninterrupted, even, capable to bear loads, free of dust and grease and must not repel adhesives.

HORIZONTAL AND UPSTAND

1. Use Sarnafil® T Clean if needed to prepare for the application of SikaRoof® Primer-600.

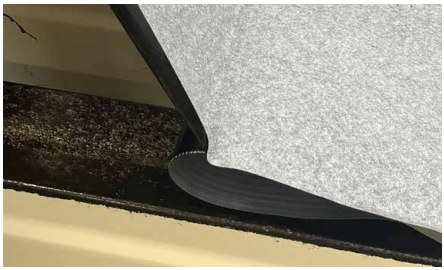
2. Apply SikaRoof® Primer-600 along horizontal and upstand area. Make sure that primer is fully dry before continuing.

3. Roll out the beginning of vapour barrier and pull up to the upper edge of thermal insulation thickness (without adhering). Adjust the vapour barrier parallel to the corrugated metal deck. Make sure it lays straight, nicely and even (no wrinkles).

4. Cut release liner with a sharp cutter (do not cut the vapour barrier).

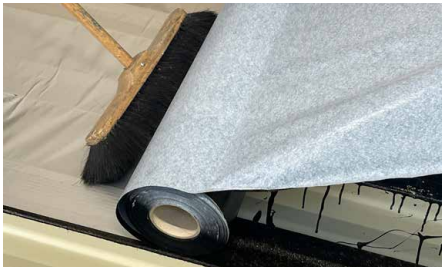
Note:
If seams are not immediately closed after unrolling the vapour barrier, all seams must be cleaned with Sarnafil® T Clean or SikaRoof® Cleaner L-100. Allow the cleaners to evaporate completely before bonding.

SELF ADHERED – VAPOUR BARRIERS

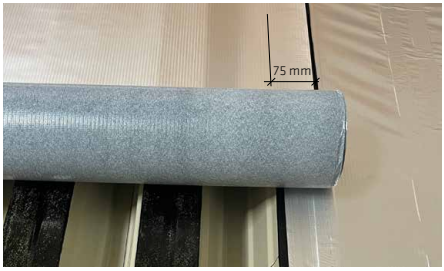


5. Start to peel off upper release liner to peel and stick the vapour barrier.

6. Make sure that the vapour barrier is properly adhered to the roof deck. You can use a broom or a roller for that.



7. Proceed the same way with the other roll end of vapour barrier.



OVERLAP

8. Overlap the vapour barrier, minimum 75 mm. Overlap always on the top crown of the corrugated metal deck.

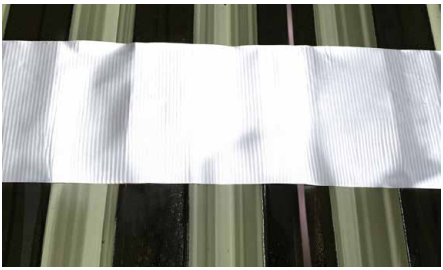
9. All joints need to be properly pressed down with a pressure roller. In case of temperatures between +5 °C and +10 °C overlap of vapour barrier need to be heated with a hot-air gun and rolled down to assure a proper bonding.

CORNER

10. Use a squeezed fold for the corners and make sure the vapour barrier is properly attached to the parapet.

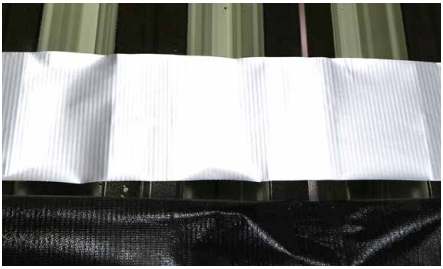
SELF ADHERED – VAPOUR BARRIERS

11. After the thermal insulation is applied, cut of the rest of the vapour barrier on top of the thermal insulation.



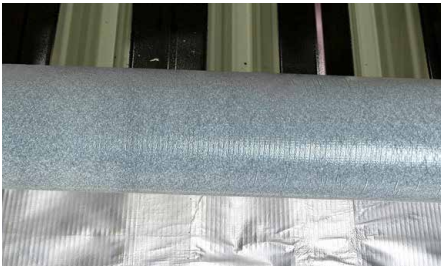
OVERLAP AT ROLL ENDS

12. Apply a 20 cm wide strip of vapour barrier in order to get a solid base.



13. Strip and roll end of vapour barrier.

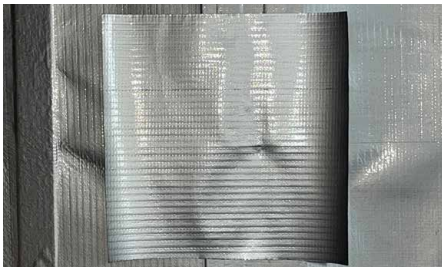
14. Apply the end of the vapour barrier to the strip – at least to half width.



15. Apply the ajoining vapour barrier (minimum 20 cm overlap).

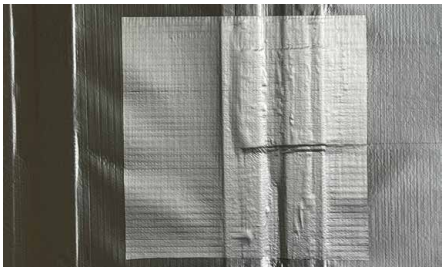
16. All vapour barrier layers need to be properly pressed down with a pressure roller.

SELF ADHERED – VAPOUR BARRIERS



T-JOINT

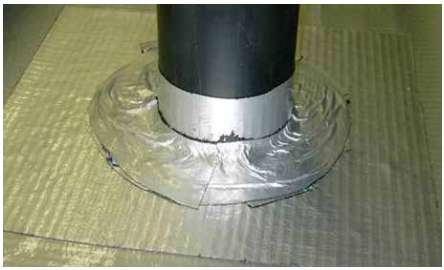
17. Cover the T-joint with an additional piece of vapour barrier, at least 25 x 25 cm.



18. Properly press down the piece of vapour barrier with a pressure roller.

OUTSIDE CORNER

19. Detailing



PIPE PENETRATION

20. Detailing

TORCH APPLIED – VAPOUR BARRIERS

1. The following equipment to be used:

- Gas cylinder (propane)
- Burner
- Connections with pressure regulator
- T square, to cut uniformly the membranes
- "Delfino" knife or similar
- Rigid HDPE core
- Hot-air machine or hand burner

2. Apply the primer according to the type of substrate at the correct consumption to the prepared surface and allow to dry before next application stage. Refer to the individual Product Data Sheets.
The appropriate primer must be chosen considering the type of substrate: cementitious, metal, wood, old floors, etc., but in all cases is recommended due its function of prepare the receiving surface and increase the adhesion between the vapour barrier.

3. Unroll the roll and align it before torching or bonding. Each vapour barrier must be laid parallel to each other and must be staggered by at least 1 m to avoid coinciding joints. The end-to-end overlaps must always be alternate, never arranged along a single line.

4. Always start on the lowest height of the slope and with the drains, the downpipes or other details.

TORCH APPLIED – VAPOUR BARRIERS

5. Use a gas burner to heat the substrate and the backing film on the underside of membrane. When the backing film starts to melt, the membrane is ready to stick.

Flame heating must bring retraction of the film and flattening of the embossing, but heating the membrane any further can damage the polyester reinforcement, which melts at 260 °C, causing retraction, undulations, curling or, in the most serious cases, puncture. Insufficient heating, on the other hand, can cause insufficient adhesion to the base between the layers or on the overlaps.

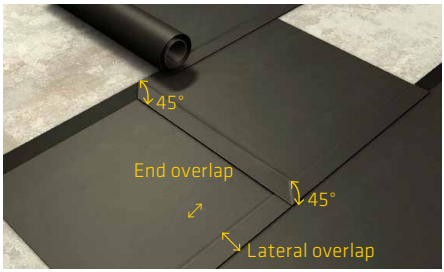
The torching of the rolls must heat the membrane and the substrate at the same time, concentrating on the roll and the overlapping.

Whereas the lateral overlaps require adhesion zones free of grit, at the end overlaps the mineral-coated surface must be heated with a certain persistence so that melting consequently takes place over an area corresponding to the width of the overlap, with consequent melting of the bituminous mastic underneath.

Once the vapour barrier compound, which will form the overlap, has been melted, this will enable the two edges to be welded perfectly.

6. The lateral overlap is the joint that runs in the direction of the length of the sheets and the end overlap is the joint along the shorter side of the sheet.

At the end overlap, a corner of the vapour barrier measuring 10 cm per side must be cut off at an angle of 45°. Always refer to the individual Product Data Sheet in order to verify the correct size of the overlapping, but should be at least 6 cm on lateral and 10 cm on the end.



7. The overlaps must be welded with great care until a trickle of melted mixture about 1 cm wide can be seen coming out along the line of the overlap.

Do not fill the joints with trowel, spatula or other tool, because the reinforcement of the vapour barrier can be affected, weakening it. In addition, the upper protective layer is removed and the reinforcement can be left exposed.

TORCH APPLIED – VAPOUR BARRIERS

8. Final layout

Application Manual:
Application Guide - Bituminous Membranes

THERMAL INSULATION

APPLICATION OF THERMAL INSULATION

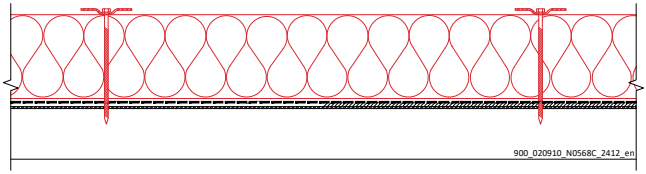
MECHANICALLY FASTENED

Thermal insulation boards must be secured to the roof deck, using appropriate spot fastening or induction welding system. The fastening density depends on type of roof waterproofing membrane fastening or adhesion system. In any case, thermal insulation boards need to rest evenly on the roof deck / substrate so that there are no significant and avoidable air spaces between the boards and the substrate. Each thermal insulation board shall be installed tightly against the adjacent boards on all sides.

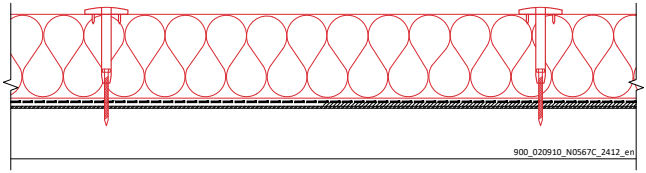
MECHANICALLY FASTENED ROOF SYSTEM – SPOT FASTENING

Where thermal insulation boards are overlaid by mechanically fastened membrane system, the thermal insulation boards shall be mechanically fastened to the deck with approved fasteners and plates at a rate according to the thermal insulation boards manufacturer's. The number of fastening elements must meet local regulations and building codes. The minimum is one fastener per thermal insulation board or one fastener per m^2.

Sarnafast® fastening system using metal washers



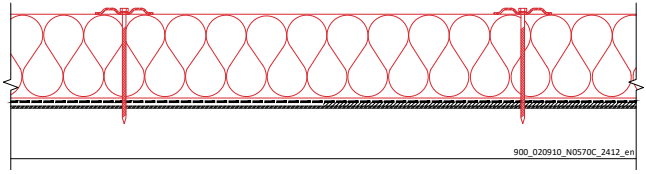
Sarnafast® fastening system using polyamide tubes



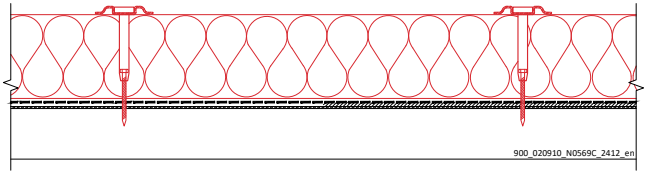
MECHANICALLY FASTENED ROOF SYSTEM – INDUCTION WELDING

Thermal insulation boards fastening pattern / spacing depending on the substrate and the design load (roof wind uplift) of the relevant fastener for the local situation of project. The fastening layout will be provided by Sika or fastening system supplier.

SikaRoof® induction welding system using metal discs



SikaRoof® induction welding system using polyamide tubes in combination with metal discs

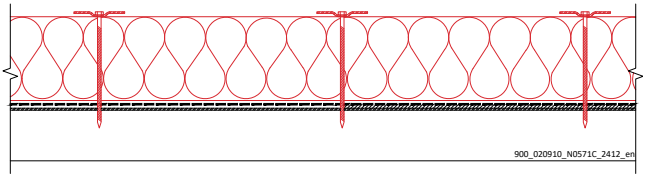


MECHANICALLY FASTENED

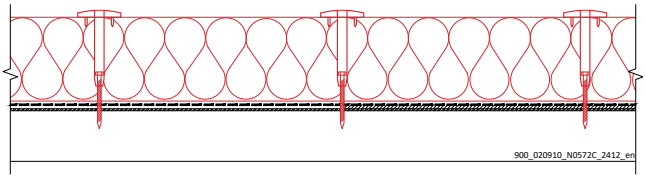
AHDERED ROOF WATERPROOFING MEMBRANE ABOVE MECHANICALLY FASTENED THERMAL INSULATION

Where thermal insulation boards are overlaid by adhered membrane system, the thermal insulation boards shall be mechanically fastened 100 % design capacity for roof wind uplift on the substrate of the local situation of project. The fastening layout will be provided by Sika or fastening system supplier.

Sarnafast® fastening system using metal washers

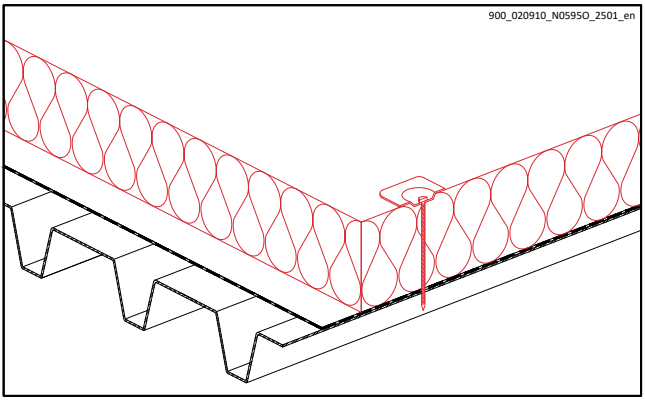


Sarnafast® fastening system using polyamide tubes



FASTENING ON TOP OF TRAPEZOIDAL METAL DECKS

Fastening always into upper corrugation of trapezoidal metal decks



MECHANICALLY FASTENED

Sarnafast® Insulation Washer DTL

DESCRIPTION
Zinc plated steel washer for the mechanically fastening of thermal insulation.

USES
Mechanically fastened thermal insulation in combination with Sarnafast® Fastener SBF-6.0 on all decks.

Sarnafast® Insulation Washer DT

DESCRIPTION
Zinc plated steel washer for the mechanically fastening of thermal insulation.

USES
Mechanically fastened thermal insulation in combination with Sarnafast® Fastener SF-4.8 on corrugated steel and plywood / OSB decks.

Sarnafast® Tube SFT-50

DESCRIPTION
Polyamide tube (PA 6) with teeths for the mechanical fastening of thermal insulation.

USES
Mechanically fastened thermal insulation in combination with Sarnafast® SBF-6.0 on all decks.

Sarnabar® Tube SBT-20

DESCRIPTION
Polyamide tube (PA 6) for tube induction welding system.

USES
In combination with SikaRoof® Induction Welding Disc FPO 16.0 and Sarnafast® Fastener SBF-6.0 on all decks.

MECHANICALLY FASTENED

SikaRoof® Induction Welding Disc FPO 6.8

DESCRIPTION
Zinc plated steel fastening discs with a green coloured hot melt adhesive coating for induction welding with Sarnafil ® TS 77 / Sarnafil ® AT roof waterproofing membranes.

USES
Mechanically field fastening of Sarnafil ® TS 77 / Sarnafil ® AT roof waterproofing membranes on thermal insulation or hard substrates by induction welding to the membrane in combination with Sarnafast® Fastener SBF 6.0 on all decks.

SikaRoof® Induction Welding Disc FPO 16.0

DESCRIPTION
Zinc plated steel fastening discs with a green coloured hot melt adhesive coating for induction welding with Sarnafil ® TS 77 / Sarnafil ® AT roof waterproofing membranes.

USES
Mechanically field fastening of of Sarnafil ® TS 77 / Sarnafil ® AT roof waterproofing membranes only over compressible thermal insulation (not for use on hard substrates) by induction welding to the membrane in combination with Sarnafast® Fastener SBF 6.0 and Sarnabar® Tube SBT-20 on all decks.

SikaRoof® Induction Cardboard Pad

DESCRIPTION
Cardboard pad.

USES
SikaRoof® Induction Cardboard Pad must be used on top of EPS / XPS thermal insulation directly placed under SikaRoof® Induction Welding Disc FPO 6.8 or 16.0. Preventing the thermal insulation from melting during the induction welding process.

MECHANICALLY FASTENED

Sarnafast® Fastener SBF-6.0

DESCRIPTION
Hardened carbon steel fastener.

USES
Fastener in combination with Sarnafast® Insulation Washer DTL, Sarnafast® Tube SFT-50, SikaRoof® Induction Welding Disc FPO 6.8 and SikaRoof® Induction Welding Disc FPO 16.0 with Sarnabar® Tube SBT-20 into corrugated steel, concrete and plywood / OSB decks.

Sarnafast® Fastener SF-4.8

DESCRIPTION
Hardened carbon steel fastener.

USES
Fastener in combination with Sarnafast® Insulation Washer DT on corrugated steel and plywood / OSB decks.

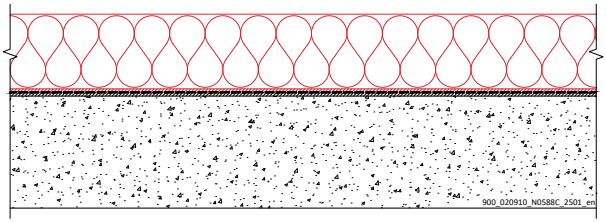
ADHERED

Adhered thermal insulation boards must be secured, using SikaRoof® Board Adhesive, a foam adhesive that bonds insulation boards to various types of construction materials.
SikaRoof® Board Adhesive must be applied according to the requirement of wind uplift zones. Roof wind uplift must not exceed 2.4 kN/m^2. For wind uplift zones above 2.4 kN/m^2 contact Sika for further advice.
Theoretical number of beads for a flat surface:

Middle zone 3 beads (25 – 30 mm) per m^2
Perimeter zone 4 beads (25 – 30mm) per m^2
Corner zone 5 beads (25 – 30mm) per m^2

Adhered thermal insulation

Brochure:
SikaRoof®
Board
Adhesive



SikaRoof® Board Adhesive

DESCRIPTION
SikaRoof® Board Adhesive is a polyurethane 1- part, fast curing, gun grade, foam adhesive that bonds insulation boards to various types of construction materials.

USES
Thermal insulation board types:
- Extruded polystyrene boards (XPS)
- Expanded polystyrene boards (EPS)
- PUR / PIR boards
- Mineral fibre boards with sufficient compressive strength and appropriate type of bonding surface

SikaRoof® Board Adhesive AND SPRAY APPLICATION GUN

1. Spray Application Gun
2. Spacer
3. Nozzle

ADHERED

FOAM ADHESVIE APPLICATION

1. Shake the can well approximately 30 times.

2. Remove small black lid from the top of the can.

3. Screw SikaRoof® Board Adhesive can into Spray Application Gun.

4. Apply the Flat Nozzle to the end of Spray Application Gun.

5. SikaRoof® Board Adhesive is ready to use. The amount of expanding foam can be adjusted by applying more or less pressure on the trigger.

6. Attach the Spacer to the end of the Spray Application Gun. That will maintain the right distance between the nozzle and the substrate.

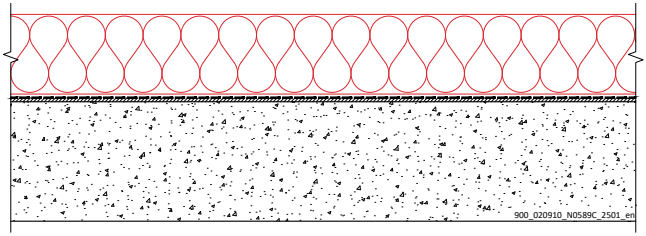
7. Apply SikaRoof® Board Adhesive directly onto the surface, then quickly press the thermal insulation board onto the flat roof with light pressure and adjust.

8. Clean all the tools and the Spray Application Gun with Sika® Boom Cleaner right after use. Uncleaned Spray Application Gun will be blocked and unfit for next application.

BALLASTED

In ballasted roof systems, thermal insulation boards to be loose laid tightly against the adjacent boards on all sides.

Loose laid thermal insulation



COVERBOARDS

APPLICATION OF COVERBOARDS

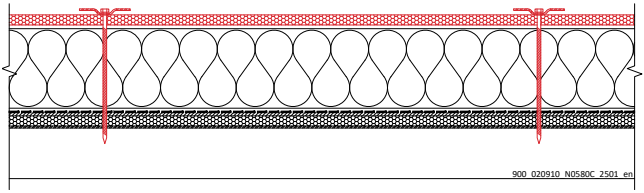
MECHANICALLY FASTENED

Coverboards must be secured to the roof deck, using appropriate spot fastening or induction welding system. The fastening density depends on type of roof waterproofing membrane fastening or adhesion and even ballasted system. Coverboards must be installed tightly against the adjacent boards on all sides.

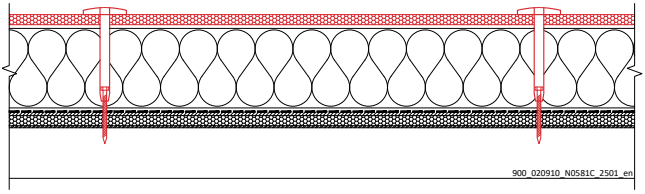
MECHANICALLY FASTENED ROOF SYSTEM – SPOT FASTENING

Where coverboards are overlaid by mechanically fastened membrane system, the coverboards shall be mechanically fastened to the deck with approved fasteners and plates at a rate according to the coverboards manufacturer.

Sarnafast® fastening system using metal washers



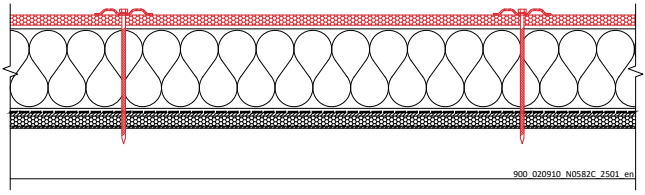
Special type of tubes to be used in combination with polyamide tube system (predrilling)



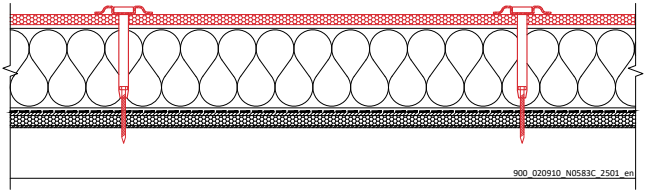
MECHANICALLY FASTENED ROOF SYSTEM – INDUCTION WELDING

Coverboards fastening pattern / spacing depending on the substrate and the design load (roof wind uplift) of the relevant fastener for the local situation of project. The fastening layout will be provided by Sika or fastening system supplier.

SikaRoof® induction welding system using metal discs



Special type of tubes to be used in combination with polyamide tube system (predrilling)

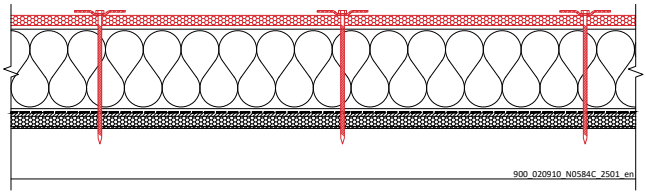


MECHANICALLY FASTENED

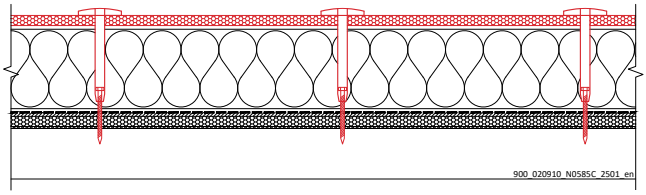
AHDERED ROOF WATERPROOFING MEMBRANE ABOVE MECHANICALLY FASTENED COVERBOARDS

Where coverboards are overlaid by adhered membrane system, the coverboards shall be mechanically fastened 100 % design capacity for roof wind upllift on the substrate of the local situation of project. The fastening layout will be provided by Sika or fastening system supplier.

Sarnafast® fastening system using metal washers

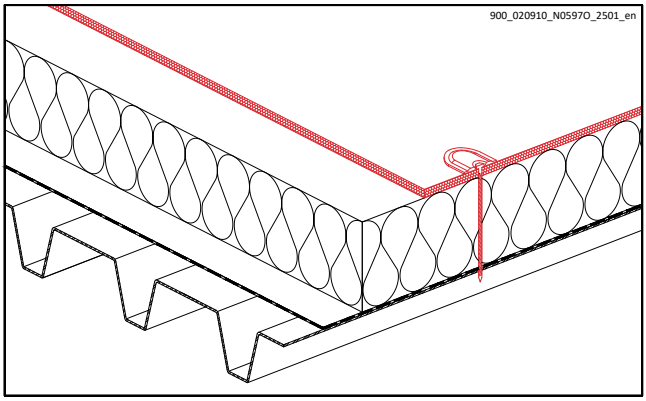


Special type of tubes to be used in combination with polyamide tube system (predrilling)



FASTENING ON TOP OF TRAPEZOIDAL METAL DECKS

Fastening always into upper corrugation of trapezoidal metal decks



MECHANICALLY FASTENED

Sarnafast® Washer IF/IG-C

DESCRIPTION
Zinc plated steel washer for the mechanically fastening of coverboards.

USES
Mechanically fastened coverboards in combination with Sarnafast® Fastener SBF-6.0 on all decks.

Recommend supplier:
Local SFS sales organization
www.sfs.com

Tube fastening
In case of tube fastening system to be installed. Predrilling of coverboards is needed.

Sarnabar® Tube SBT-20

DESCRIPTION
Polyamide tube (PA 6) for tube induction welding system.

USES
In combination with SikaRoof® Induction Welding Disc FPO 16.0 and Sarnafast® Fastener SBF-6.0 on all decks.

SikaRoof® Induction Welding Disc FPO 16.0

DESCRIPTION
Zinc plated steel fastening discs with a green coloured hot melt adhesive coating for induction welding with Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes.

USES
Mechanically field fastening of of Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes on coverboards by induction welding to the membrane in combination with Sarnafast® Fastener SBF 6.0 and Sarnabar® Tube SBT-20 on all decks.

MECHANICALLY FASTENED

SikaRoof® Induction Welding Disc FPO 6.8

DESCRIPTION
Zinc plated steel fastening discs with a green coloured hot melt adhesive coating for induction welding with Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes.

USES
Mechanically field fastening of Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes on coverboards by induction welding to the membrane in combination with Sarnafast® Fastener SBF 6.0 on all decks.

Sarnafast® Fastener SBF-6.0

DESCRIPTION
Hardened carbon steel fastener.

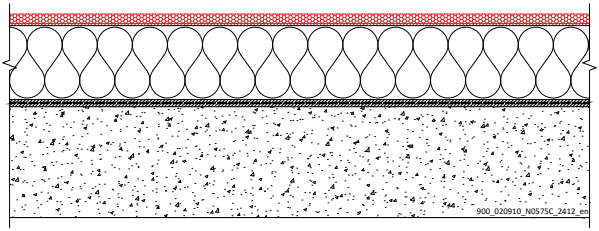
USES
Fastener in combination with Sarnafast® Washer IF/G-C, SikaRoof® Induction Welding Disc FPO 6.8 and SikaRoof® Induction Welding Disc FPO 16.0 with Sarnabar® Tube SBT-20 on corrugated steel, concrete and plywood / OSB decks.

ADHERED

Adhered coverboards must be secured, using SikaRoof® Board Adhesive, a foam adhesive that bonds coverboards to various types of construction materials.
SikaRoof® Board Adhesive must be applied according to the requirement of wind uplift zones. Roof wind uplift must not exceed 2.4 kN/m². For wind uplift zones above 2.4 kN/m² contact Sika for further advice. Theoretical number of beads for a flat surface.

- Middle zone 3 beads (25 – 30 mm) per m²
- Perimeter zone 4 beads (25 – 30mm) per m²
- Corner zone 5 beads (25 – 30mm) per m²

Adhered coverboard



SikaRoof® Board Adhesive

DESCRIPTION
SikaRoof® Board Adhesive is a polyurethane 1- part, fast curing, gun grade, foam adhesive that bonds insulation boards to various types of construction materials.

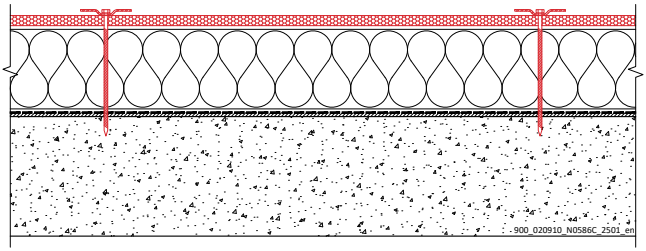
USES
Thermal insulation board types:
- Extruded polystyrene boards (XPS)
- Expanded polystyrene boards (EPS)
- PUR / PIR boards
- Mineral fibre boards with sufficient compressive strength and appropriate type of bonding surface

Brochure:
SikaRoof® Board Adhesive

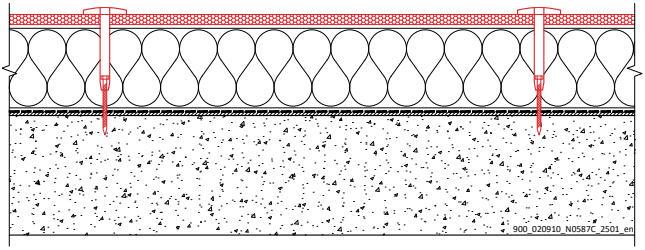
BALLASTED

In ballasted roof systems, coverboards must be mechanically fastened to the deck with approved fasteners and plates at a rate according to the coverboards manufacturer.

Sarnafast® fastening system using metal washers



Special type of tubes to be used in combination with polyamide tube system (predrilling)



BALLASTED

Sarnafast® Washer IF/IG-C

DESCRIPTION
Zinc plated steel washer for the mechanically fastening of coverboards.

USES
Mechanically fastened coverboards in combination with Sarnafast® Fastener SBF-6.0 on all decks.

Recommend supplier:
Local SFS sales organization
www.sfs.com

Tube fastening
In case of tube fastening system to be installed. Predrilling of coverboards is needed.

Sarnafast® Fastener SBF-6.0

DESCRIPTION
Hardened carbon steel fastener.

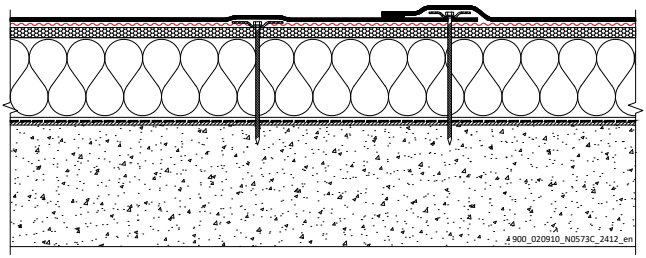
USES
Fastener in combination with Sarnafast® Washer IF/G-C, on corrugated steel, concrete and plywood / OSB decks.

LEAK DETECTION

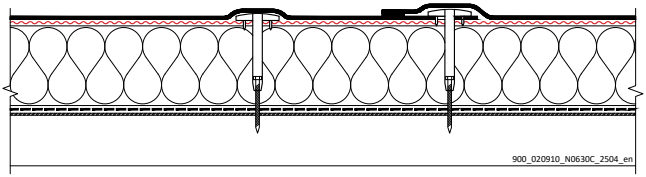
MECHANICALLY FASTENED AND BALLASTED

SikaRoof® Glass – Graphite Fleece is always rolled-out directly underneath and therefore before mechanically fastened or ballasted Sarnafil® T / Sarnafil ®AT roof waterproofing membranes will be installed. Loose lay SikaRoof® Glass - Graphite Fleece. Overlap adjoining sheets between 80 mm to 100 mm.

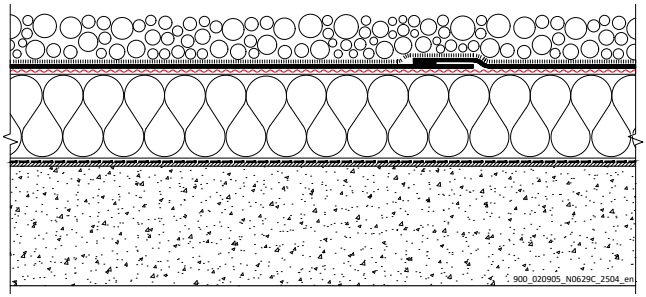
MECHANICALLY FASTENED
SikaRoof Glass – Graphite Fleece loose laid on coverboard



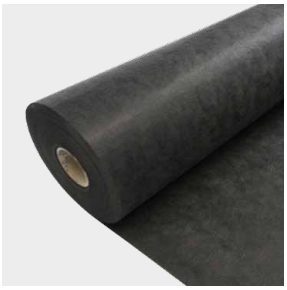
MECHANICALLY FASTENED
SikaRoof Glass - Graphite Fleece loose laid on thermal insulation



BALLASTED
SikaRoof Glass - Graphite Fleece loose laid on thermal insulation



MECHANICALLY FASTENED AND BALLASTED

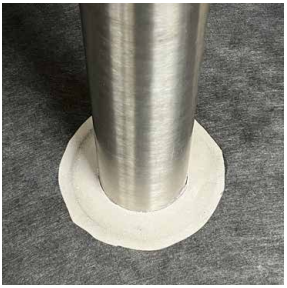


SikaRoof® Glass – Graphite Fleece

DESCRIPTION
SikaRoof® Glass – Graphite Fleece is a conductive and fire protection layer made of non-woven glass fibre.

USES
SikaRoof® Glass – Graphite Fleece is used as a conductive layer to facilitate leak detection below loose laid Sarnafil® T / Sarnafil® AT roof waterproofing membranes.

Set back the SikaRoof® Glass - Graphite Fleece 20 mm from all perimeter, skylights, vent pipes, upstands, roof outlets or any other penetrations on the roof area.

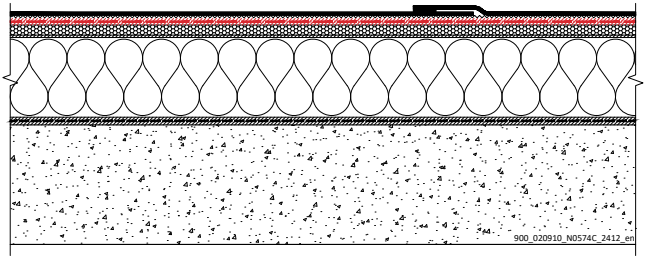


Loose lay SikaRoof® Glass – Graphite Fleece and overlap adjoining sheets between 80 mm to 100 mm. Bond side and end laps with Sarnatape®-60 at regular intervals.

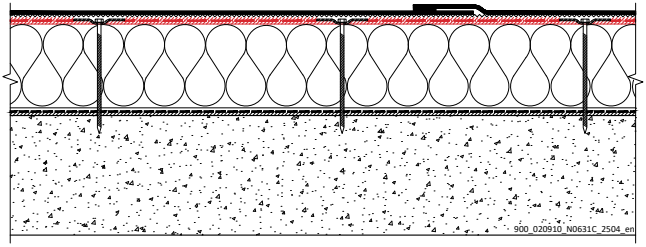
ADHERED

SikaRoof® Stainless Steel Mesh is always rolled out directly underneath and therefore before adhered Sarnafil® TG 76 Felt PS roof waterproofing membrane will be installed.
Loose lay SikaRoof® Stainless Steel Mesh with 100 mm overlaps and can be fixed during installation or permanently with tubes and fasteners or other suitable materials. The adhesive is spread evenly onto the substrate and the stainless-steel mesh using a synthetic application roller directly from the container and ensuring there are no lumps in the applied layers.

SikaRoof Stainless Steel Mesh adhered on cover-board



SikaRoof Stainless Steel Mesh adhered on thermal insulation



SikaRoof® Stainless Steel Mesh can not be used in combination with self adhered membranes.

ADHERED

SikaRoof® Stainless Steel Mesh

DESCRIPTION
SikaRoof® Stainless Steel Mesh is an electrically conductive stainless steel mesh.

USES
SikaRoof® Stainless Steel Mesh is used as a conductive layer to facilitate leak detection below adhered Sarnafil® TG 76 Felt PS roof waterproofing membranes.

Sarnacol®-2142 S

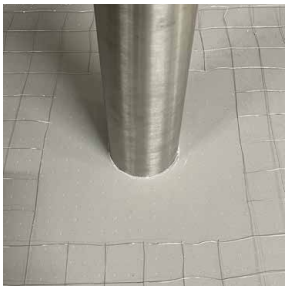
DESCRIPTION
Sarnacol®-2142 S is a 1-part, polyurethane based moisture curing adhesive.

USES
Bonding Sarnafil® TG 76 Felt PS roof waterproofing membranes to roof substrates.

When cutting the SikaRoof® Stainless Steel Mesh, the wires must be cut clean, right to the cross wire. Never leave wires along the edges of the SikaRoof® Stainless Steel Mesh.

Install SikaRoof® Stainless Steel Mesh 50 mm away from upstands and parapets. Use tubes with fastener or other suitable materials to keep the SikaRoof® Stainless Steel Mesh in place.

ADHERED



Around penetrations SikaRoof® Stainless Steel Mesh to be cutted at least 50 mm away from penetrations.

Overlapping of SikaRoof® Stainless Steel Mesh to be at least 100 mm (two squares). The overlapping can be fixed using tubes with fastener or other suitable materials to keep the SikaRoof® Stainless Steel Mesh in place.

Apply Sarnacol®-2142 S with a roller evenly over the exposed substrate and the SikaRoof® Stainless Steel Mesh.

ALL TYPES OF ROOFING SYSTEMS

Sarnafil® T Control Pipe Set

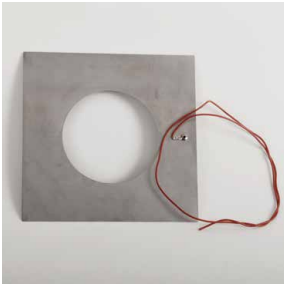
DESCRIPTION
The Sarnafil® T Control Pipe Set is made of rigid high quality polypropylene (PP) pipe and cap, expanded polypropylene (EPP) insulation plug and prefabricated Sarnafil® flashing.

USES
The Sarnafil® T Control Pipe Set enables to check the watertightness of a flatroof from the rooftop.

Sarnafil® T Control Pipe Set for SikaRoof® Sensor Active R

DESCRIPTION
The Sarnafil® T Control Pipe Set for SikaRoof® Sensor Active R comprises of 3 parts. A rigid high quality polypropylene (PP) pipe, an expanded polypropylene (EPP) insulation plug with cap and a prefabricated Sarnafil® flashing.

USES
The Sarnafil® T Control Pipe Set enables to house the SikaRoof® Sensor Active R and provides an inspection point on the flat-rooftop to check / monitor the watertightness.



SikaRoof® Control Contact Plate

DESCRIPTION
The SikaRoof® Control Contact Plate is a stainless steel plate to connect the applied conductive graphite fleece or steel mesh with the read-out device.

USES
Contact plate between the applied SikaRoof ® Glass – Graphite Fleece or SikaRoof® Stainless Steel Mesh and read-out device.

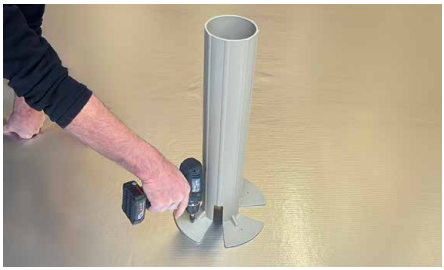
SikaRoof® Sensor Active R

DESCRIPTION
The SikaRoof® Sensor Active R is a battery powered, wireless sensor for water detection and monitoring the humidity in flat roof build-up.

USES
SikaRoof® Sensor Active R is used to detect water ingress and to monitor the humidity in flat roof build-ups.

ALL TYPES OF ROOFING SYSTEMS

1. Place the SikaRoof® Control Pipe 110 on the lowest point of the roof deck on top of the vapour barrier. The vapour barrier needs to enable free water flow.



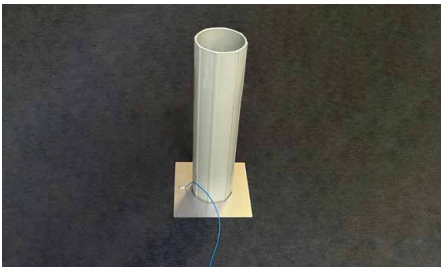
2. Fix the SikaRoof® Control Pipe 110 with four appropriate fasteners to the roof deck.

Note:
Never shorten the length of the SikaRoof® Control Pipe 110 spigot.

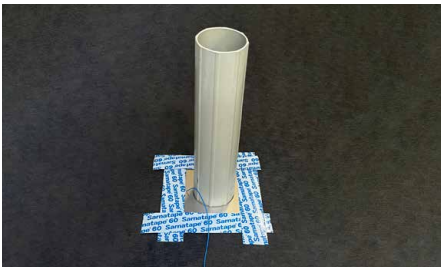
3. Cut out Ø 112 mm of the thermal insulation including the space for the SikaRoof® Control Pipe 110 reinforcement ribs and insert it over the control pipe spigot.

4. If leak detection is required:
Apply the SikaRoof® Glass - Graphite Fleece or SikaRoof® Stainless Steel Mesh on top of the thermal insulation. Cut out approximately Ø 125 mm of the of the graphite fleece or steel mesh and insert it over the SikaRoof® Control Pipe 110 spigot.

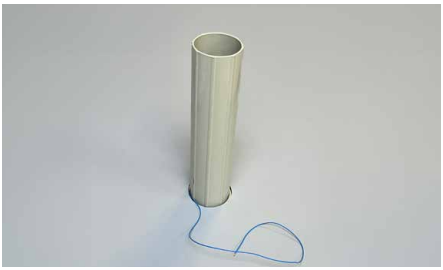
ALL TYPES OF ROOFING SYSTEMS



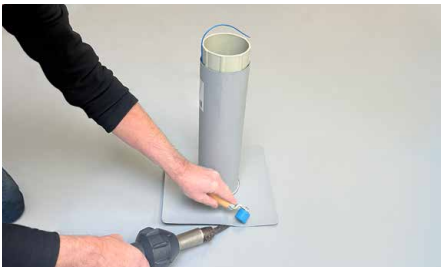
5. If leak detection is required:
Insert the SikaRoof® Control Contact Plate over the SikaRoof® Control Pipe 110 spigot.



6. If leak detection is required:
Fix the SikaRoof® Control Contact Plate with Sarnatape®-60 adhesive tape to the SikaRoof® Glass - Graphite Fleece or SikaRoof® Stainless Steel Mesh.



7. Apply the Sarnafil® T / Sarnafil® AT roof waterproofing membranes. Cut out Ø 112 mm of the membrane and insert it over the SikaRoof® Control Pipe 110 spigot.



8. Insert the Ø 110 mm Sarnafil® T Pipe Flashing over the SikaRoof® Control Pipe 110 spigot.
In case the SikaRoof® Control Contact Plate is applied, bring up the cable between the control pipe spigot and the pipe flashing, hot-air weld the pipe flashing to the Sarnafil® T / Sarnafil® AT roof waterproofing membranes.

ALL TYPES OF ROOFING SYSTEMS

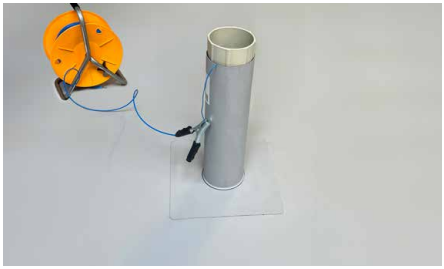
9. Remove the insulation wedge from the insulation plug.

Note:
Never shorten the length of the insulation plug.

10. Insert the SikaRoof® Sensor Active R into the cut-out section. Once the sensor is correctly placed, the insulation wedge is inserted again to hold the sensor in place

Note:
The sensor needs to be activated before it is installed into the insulation plug.

11. Insert the complete insulation plug with cap into the SikaRoof® Control Pipe 110. Make sure that the SikaRoof® Sensor Active R at the end of the cable is in contact with the vapour barrier.



12. If leak detection is required:
The SikaRoof® Control Contact Plate cable enables to connect the leak detection device.

LOW AND HIGH VOLTAGE LEAK DETECTION

LOW VOLTAGE LEAK DETECTION

Low voltage leak detection requires only a thin film of water on the tested surface. The negative output of the generator is applied to the trace wire which borders the test area, whilst the positive output is connected to a suitable building substrate. If water has penetrated the roof waterproofing membranes within the test area, a current will flow from this source point, via the water on the roof towards the trace wire. The detector is used to identify the direction of electrical current and detect the point of origin (where water is penetrating the roof waterproofing membranes).

ELIS TECH s.r.o.
Živnostenská 2, Bratislava
811 06 Slovakia
www.elis.tech

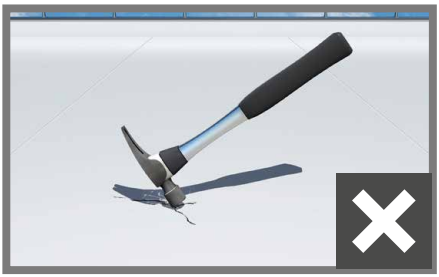
HIGH VOLTAGE LEAK DETECTION

The earth lead from the high voltage test device is connected to a convinient earth point on the structure. A high voltage DC current is applied to the dry surface of the roof waterproofing membranes. When there are no faults present, the roof waterproofing membranes act as an electrical insulator by stopping the flow of current out of the device. When the electrode passes a fault or hole, the high voltage jumps the gap between the electrode and the conductive layer below the roof waterproofing membranes, causing a current to flow. The audible and visual alarm of the testing device will alert the operator.

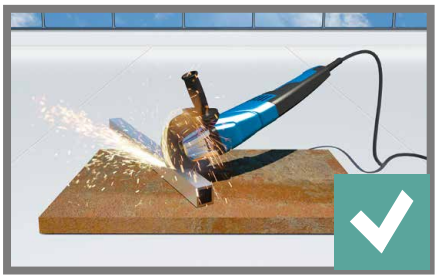
www.leak-detection.com

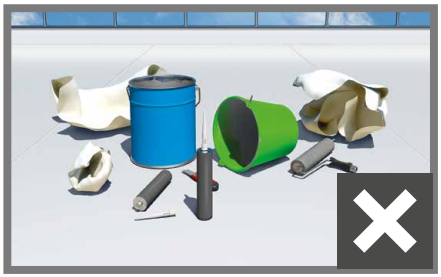
GENERAL INFORMATION ROOF WATERPROOFING MEMBRANES

ROOF PROTECTION CONCEPT



ROOF PROTECTION CONCEPT





STORAGE, CUTTING, USES AND MATERIAL TYPES

STORAGE OF Sarnafil® T / Sarnafil® AT ROOF WATERPROOFING MEMBRANES
On the building site, Sarnafil® T / Sarnafil® AT roof waterproofing membranes must be protected against humidity, dirt, dust and UV exposure.

CUTTING Sarnafil® T / Sarnafil® AT ROOF WATERPROOFING MEMBRANES
Cut Sarnafil® T / Sarnafil® AT roof waterproofing membranes with scissor, knife or Sika Membrane slitter.

Sarnafil® T ROOF WATERPROOFING MEMBRANES			
Roof systems	**Type of membrane technology**	**Detailing**	**Cover strips for:** ■ Butt joints ■ Intermediate fastening ■ Perimeter fastening
Mechanically fastened systems	Sarnafil® TS 77	Sarnafil® TS 77* Sarnafil® TG 66 Sarnafil® T 66 D Sarnafil® AT FSA-P	Sarnafil® TS 77
Ballasted systems	Sarnafil® TG 66	Sarnafil® TG 66 Sarnafil® T 66 D Sarnafil® AT FSA-P	Sarnafil® TG 66
Adhered systems with adhesive	Sarnafil® TG 76 Felt PS	Sarnafil® TG 66 Sarnafil® T 66 D Sarnafil® AT FSA-P	Sarnafil® TG 66
Adhered systems self adhered	Sarnafil® TG 76 FSA	Sarnafil® TG 66 Sarnafil® T 66 D Sarnafil® AT FSA-P	Sarnafil® TG 66
Sarnafil® AT ROOF WATERPROOFING MEMBRANES			
Roof systems	**Type of membrane technology**	**Detailing**	**Cover strips for:** ■ Butt joints ■ Intermediate fastening ■ Perimeter fastening
Mechanically fastened and ballasted systems	Sarnafil® AT	Sarnafil® AT FSA-P Sarnafil® AT Sarnafil® T 66 D	Sarnafil® AT
Adhered systems self adhered	Sarnafil® AT FSA	Sarnafil® AT FSA-P Sarnafil® AT Sarnafil® T 66 D	Sarnafil® AT

* Sarnafil® TS 77 only to be used for straight details, not for batches along small detailing work. In all other cases only Sarnafil® TG 66 or Sarnafil® T 66 D to be used.

WELDING PREPARATION / CLEANERS

CLEANING AND SEAM PREPARATION PROCEDURES FOR Sarnafil® T / Sarnafil® AT ROOF WATERPROOFING MEMBRANES

With Sarnafil® T / AT roof waterproofing membranes,, the seam area must be treated on both sides prior to welding, depending on the technology and membrane conditions. For seam preparation and welding, the seam area must be clean and dry.

	Condition	Type of membrane technology	Steps to be taken in overlap area (both sides)
Installation phase	New	Sarnafil® T	■ Prepare seam areas using a clean cloth moistened with Sarnafil® T Prep or Sarnafil® T Wet Task Set ■ Allow Sarnafil® T Prep to evaporate
Utilization phase	Slightly soiled (loose dust, dirt, bitumen residue)	Sarnafil® T Sarnafil® AT	■ Wipe off loose dirt ■ If necessary, wash down with water ■ Clean with Sarnafil® T Prep or Sarnafil® T Wet Task Set ■ Prepare seam using a clean cloth moistened with Sarnafil® T Prep or Sarnafil® T Wet Task Set ■ Allow Sarnafil® T Prep to evaporate
	Heavily soiled (repair work, extensions to existing membranes etc.)	Sarnafil® T Sarnafil® AT	■ Wipe off loose dirt ■ Clean with water or water based, all-purpose cleaner using a brush or cleaning pad ■ Clean with Sarnafil® T Clean and allow to evaporate ■ Prepare seam using a clean cloth moistened with Sarnafil® T Prep or Sarnafil® T Wet Task Set ■ Allow Sarnafil® T Prep to evaporate

Note:
When repairing membranes the new Sarnafil® T / Sarnafil® AT should be laid underneath the existing roof waterproofing membranes.

Note:
When using cleaning fluids and the seam preparation agent, protective gloves must be worn.

Caution:
Avoid all contact between Sarnafil® T Clean or Sarnafil® T Prep and polystyrene insulation boards.

WELDING PREPARATION / CLEANERS

Sarnafil® T Prep
Sarnafil® T Prep is used to prepare seams of Sarnafil® T roof waterproofing membranes in order to ensure optimum seam quality. Sarnafil® T Prep is also suitable as general purpose cleaner to remove light dirt or bitumen residue from Sarnafil® T / Sarnafil® AT roof waterproofing membranes.

Sarnafil® Wet Task Set
The set is filled with 5 litres of Sarnafil® T Prep and the lid firmly closed. The cloth removed through the dispenser opening are soaked with Sarnafil® T Prep for economical seam preparation. A volume fleece roll (Sarnafil® T refill cloth) is offered for the reusable dispenser bucket.

Sarnafil® T refill cloth

Sarnafil® T seam preparation cloths
The Sarnafil® T seam preparation cloths are an aid for seam pretreatment and possible cleaning. The cloths must be changed during cleaning. Fresh cloths should be used for seam pretreatment. Wipes soaked with Sarnafil® T Clean must not be used for seam pre-treatment with Sarnafil® T Prep.

WELDING PREPARATION / CLEANERS

Sarnafil® T Clean
Sarnafil® T Clean is a cleaner to remove heavy soiling and adhesive residues from Sarnafil® T / Sarnafil® AT roof waterproofing membranes. Sarnafil® T Clean is also suitabe for cleaning tools and degreasing metal sheets.

Solvent T-660
Solvent T-660 is used to remove adhesive residues from Sarnafil® T / Sarnafil® AT roof waterproofing membranes. It is also used for cleaning tools and degreasing metal sheets.

MEMBRANE CLEANING

SikaRoof® Clean Set detail
Cleaning small surfaces of Sarnafil® T / Sarnafil® AT roof waterproofing membranes.

The SikaRoof® Clean Set detail consists of:

1 Container SikaRoof® Clean agent 5 L
5 pcs. SikaRoof® Clean Pad detail
3 pcs. Cleaning pad extra strong
1 Drain tap (for filling spray bottle)
1 Spray bottle
1 Handpad holder
25 pcs. Cleaning cloths
1 Pail for 6 L water

SikaRoof® Clean agent
Solvent free cleaning liquid based on water and less than 5 % non-ionic surfactants, perfumes. To clean surfaces of Sarnafil® T / Sarnafil® AT roof waterproofing membranes in combination with SikaRoof® Clean Pad detail.

SikaRoof® Clean Pad detail
Cleaning pad based on melamine. To clean surfaces of Sarnafil® T / Sarnafil® AT roof waterproofing membranes in combination with SikaRoof® Clean agent.

MEMBRANE CLEANING

1. Soak SikaRoof® Clean Pad detail with water (must be completely wet).

2. Spray / apply SikaRoof® Clean agent onto the surface to be cleaned.

3. Clean with SikaRoof® Clean Pad detail (use the hand pad holder).

4. Remove remaining liquid on the cleaned surface with a cleaning towel.

HAND WELDING

HAND WELDING TOOLS FOR Sarnafil® T / Sarnafil® AT
The following tools are basically needed:

1 Hand welder Leister Triac AT / ST
2 20 mm wide slot nozzle for details
3 40 mm wide slot nozzle for straight welds
4 Tubular nozzle with speed welding nozzle for the installation of Sarnafil® T Welding Cord
5 Pressure roller PTFE (blue) for Sarnafil® T or PTFE (green) for Sarnafil® AT
6 Screwdriver (approximately 5 mm)
7 SikaRoof® Chamfer tool either for Sarnafil® T / Sarnafil® AT
8 Brush to clean different nozzle types

The following recommended products can be ordered from company Leister.

www.leister.com

LEISTER®

Leister Triac AT / ST
Hand welding tool for welding Sarnafil® T / Sarnafil® AT roof waterproofing membranes.

The temperature of the hand welder must be adjusted to suit the selected nozzle width and the type of welder.

Nexheat 300 A-LP
The Nexheat 300 A-LP, 18 V and 600 W is a wireless heat gun with battery management.

The welding gun is therefore ideal for repairs, detailed work and smaller projects on construction sites.

HAND WELDING

The air outlet of the nozzle must be of uniform width and open over the entire width. The nozzle should be positioned so that it forms an airtight seal on to the neck of the hand welder.

20 mm wide slot nozzle for details.

40 mm wide slot nozzle for straight welds.

Tubular nozzle in combination with speed welding nozzle.

Speed welding nozzle for the installation of Sarnafil® T Welding cord.

HAND WELDING

Pressure roller with ball bearings (blue) – 28 mm, PTFE for the hand welding of Sarnafil® T roof waterproofing membranes.

Pressure roller with ball bearings (green) – 28 mm, silicone PTFE for the hand welding of Sarnafil® AT roof waterproofing membranes.

Pressure roller – 80 mm, silicone

Pressure roller – 8 mm, PTFE

HAND WELDING

SikaRoof® Chamfer tool for transverse joints in combination with Sarnafil® T roof waterproofing membranes.

SikaRoof® Chamfer tool for transverse joints in combination with Sarnafil® AT roof waterproofing membranes.

Seam weld tester

Utility scissor

HAND WELDING

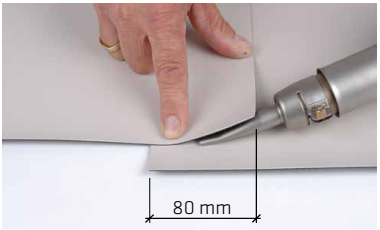
BASIC SETTINGS FOR THE HAND WELDING OF Sarnafil® T ROOF WATERPROOFING MEMBRANES

Hand welder Leister	Nozzle 20 mm	Nozzle 40 mm
Triac AT	280 – 320 °C	280 – 320 °C
Triac ST	4.5 – 5.0	5.0 – 5.5

BASIC SETTINGS FOR THE HAND WELDING OF Sarnafil® AT ROOF WATERPROOFING MEMBRANES

Hand welder Leister	Nozzle 20 mm	Nozzle 40 mm
Triac AT	280 – 320 °C	280 – 320 °C
Triac ST	4.5 – 5.0	5.0 – 5.5

- Higher settings must be avoided. They will impair seam quality.
- Welding temperature to be adjusted according to local conditions.
- Perform test weld prior welding process.

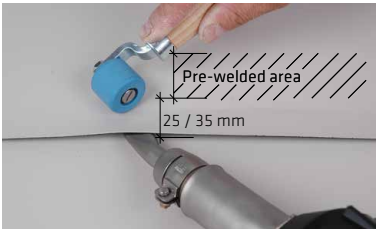


When welding Sarnafil® T / Sarnafil® AT, the overlap area must be clean and dry.

Overlaps are required as follows:
- 80 mm for loose laid
- 80 mm for fully adhered

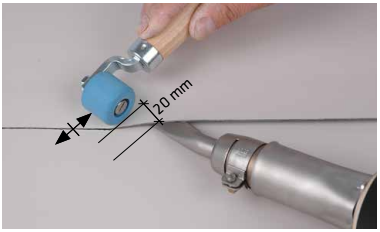
Carried out in three steps:

1. Spot weld the overlap



2. Pre-weld
Weld the rear overlap area so that a 25 / 35 mm opening remains for the final weld.

Nozzle 20 mm: 25 mm
Nozzle 40 mm: 35 mm



3. Final weld
Weld the 25 / 35 mm opening area. Guide the pressure roller at a distance of 20 mm parallel to the air outlet of the welding nozzle. Roll the pressure roller fully across the seam. The effective width of overlaps welded by hot-air must be a minimum of 20 mm.

Attention:
Always perform a test weld.

AUTOMATIC WELDING

AUTOMATIC WELDING MACHINES

Leister Varimat 300 / 500 / 700
The Varimat automatic welding machine ensures reliable process safety when welding Sarnafil® T / Sarnafil® AT roof waterproofing membranes. With high contact pressure, easy conversion from 230 to 400 V and innovative swing-in mechanism, it offers fast and precise nozzle positioning into the overlap. The flexible transport axis of the Varimat ensures accurate tracking, even in roof closures close to the edge.

Attention:
The basic machine settings must be checked in any case by carrying out a test weld and by observing the welding pattern. Adjust the basic setting as required.
Please carry out test welding and seam checks.

Typ of welding machine	Leister Varimat 300 / 500 / 700	
Typ of membrane	**Sarnafil® T membranes**	**Sarnafil® AT membranes**
Speed	3.00 m / min	3.00 m / min
Temperature	450 °C	450 °C
Air setting	100 %	100 %

BASIC SETTINGS FOR THE AUTOMATIC WELDING OF Sarnafil® T ROOF WATERPROOFING MEMBRANES

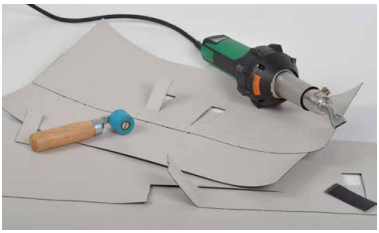
Typ of welding machine	Sarnamatic® 681	Sarnamatic® 661
Speed	3.00 m / min	3.00 m / min
Temperature	460 °C	380 °C
Air setting	90 %	14'000 rpm

BASIC SETTINGS FOR THE AUTOMATIC WELDING OF Sarnafil® AT ROOF WATERPROOFING MEMBRANES

Typ of welding machine	Sarnamatic® 681	Sarnamatic® 661
Speed	3.00 m / min	3.00 m / min
Temperature	470 °C	420 °C
Air setting	100 %	14'000 rpm

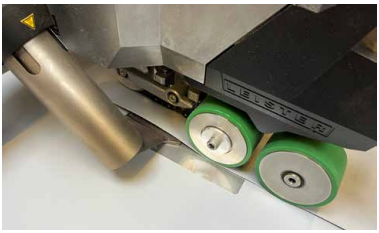
rpm = rounds per minute

TEST WELDING



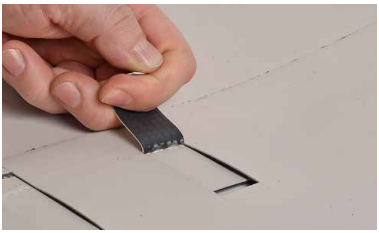
Before welding the actual roof waterproofing membrane, a test weld must be carried out to check the settings of the hand welder and / or the automatic welding machine. The test weld must be also carried out to check local site conditions during a working day.

A test weld consists of:
a) Test welding with peel test
b) Seam check during test welding
c) Seam check after test welding



a) Test welding with peel test
Before welding the actual roof waterproofing membranes, a test weld with subsequent peel test must be carried out. This test welding serves to check the temperature settings of the hand welder or the basic settings of the automatic welding machine so that they can be adjusted to the site conditions if necessary.

1. Test welding
Carry out a test weld (automatic / hand).

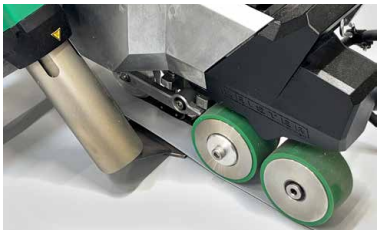


2. Peel test across the seam
The welding seam must be fully cooled. Cut a small strip into the upper membrane. Pull away the strip of the upper membrane sheet across the seam. The seam must not separate. Any tearing must be located outside the welded seam, either in the synthetic sheeting (as shown) or within the layer of reinforcing material.

3. Peel test along the seam
Cut a small strip over the fully cooled welding seam at the beginning or end of the welding seam. Pull away the strip of the upper membrane in the direction of the seam. The seam must not separate. Any tearing must be located outside the welded seam, either in the synthetic sheeting (as shown) or within the layer of reinforcing material.

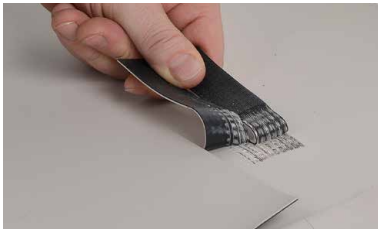
TEST WELDING

Attention:
Incorrect peeling is an indication of insufficient cleaning and seam preparation or an incorrectly set welding machine or hand welder.



b) Seam check during test welding
During welding the seam must be visually checked.

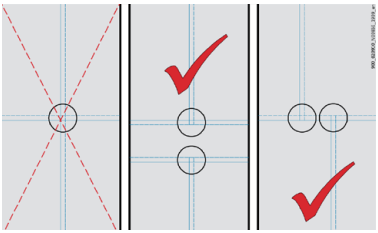
Size of the welding bead
A continuous, excessively large welding bead is an indication of an improperly welded seam.



c) Seam check after test welding
After welding the seam should be visually checked.

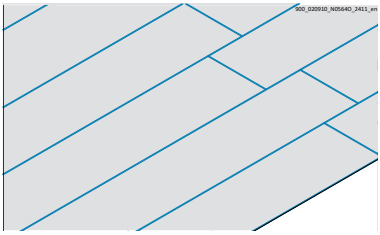
Material discoloration
Black or brown discoloration in the weld overlap (visible when pulling away the upper sheet at the end of the seam) indicates that the welding temperature is too high or the welding speed is too slow.

TRANSVERSE JOINTS

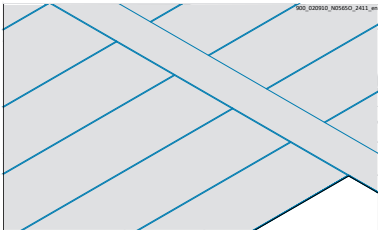


By proper arrangement of Sarnafil® T / Sarnafil® AT roof waterproofing membranes, all seams can be reduced to straight welded seams and transverse joints (T-joint).

Cross joints are to be avoided!



Stagger at roof waterproofing membrane sheets ends to avoid cross joints.

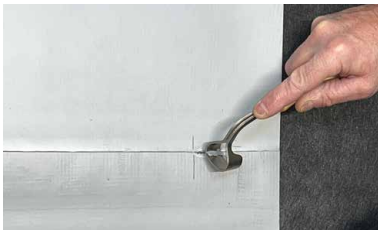


To avoid cross joints on large roof surfaces, lay out a transversal roof waterproofing membrane sheet of maximum:

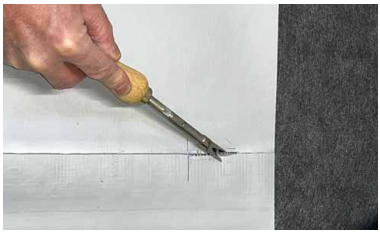
Mechanically fastened or loose laid, ballasted membranes:
Maximum 1000 mm width

Adhered membranes:
200 mm cover strip

TRANSVERSE JOINTS



Sarnafil® T TRANSVERSE JONTS
To achieve proper welding, all transverse joints of all Sarnafil® T thicknesses, for hand and automatic welding have to be chamfered.



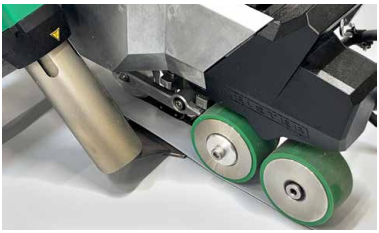
Sarnafil® AT TRANSVERSE JONTS
To achieve proper welding, all transverse joints of all Sarnafil ® AT thicknesses, for hand and automatic welding have to be chamfered.

Weld the Sarnafil® T / Sarnafil® AT roof waterproofing membranes over the chamfered area.

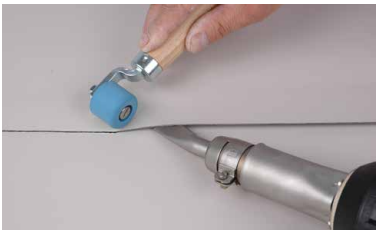
SEAM CHECK DURING WELDING

GENERAL
During welding the seam must be inspected visually (shiny surfaces, discoloration of the welding bead, size of welding bead).

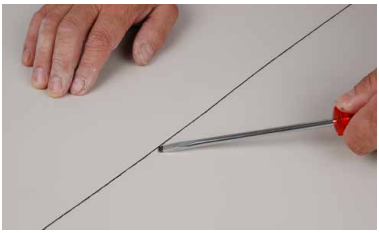
- **Material discoloration**
  Black or brown next to or in the weld itself indicates that the welding temperature is too high or the welding speed is too slow.
- **Size of the welding bead**
  A continuous, excessively large welding bead is an indication of an improperly welded seam.



FORMATION OF A WELDING BEAD DURING AUTOMATIC WELDING
During the automatic welding process, the welding bead can be seen underneath the pressure roller. After the cooling-off period, little or no welding bead should remain with Sarnafil® T / Sarnafil® AT roof waterproofing membranes.



FORMATION OF A WELDING BEAD DURING HAND WELDING
During hand welding the welding bead is more prominent and remains clearly visible after cooling.



MECHANICAL SEAM CHECK
All seams must be checked mechanically once they have completely cooled. For this purpose a screwdriver (approximately 5 mm wide, with rounded edges) or a seam weld tester (below picture) should be used. Although slight pressure should be applied to the seam, the membrane must not be damaged.
The mechanical seam check assists in locating any seam areas not fully welded.

VISUAL SEAM CHECK
After welding all seams should be inspected visually (shiny surfaces, size and quality of welding bead). Special attention should be paid to transverse joints, penetrations and flashings.

VACCUM TESTING

Leister Vacuum Plate 100-LP
For leak testing of welded seams, especially T-joints, transitions from machine to hand welding and suspicious welding seams on roof waterproofing membranes.

- The welding area must be free of contamination. Dirt particles may compromise the test.
- The seam area to be inspected must be sprayed with a leak detection agent (e.g. soapy water) directly before the inspection.
- The liquid must not damage the seam and the weld material.

- Position the Vacuum Plate 100-LP at the point to be tested.
- Position and press on the Vacuum Plate 100-LP so that the area to be tested is approximately in the center of the field of vision of the testing device.
- The seam is considered tight if no bubbles occur.
- Mark and repair areas that are not tight.

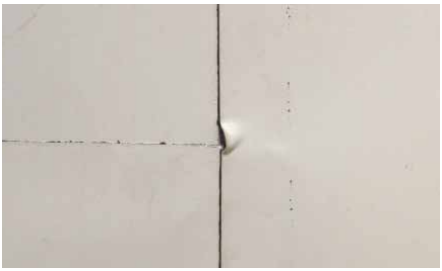
The recommended Vacuum Plate 100-LP can be ordered from company Leister.

www.leister.com

LEISTER®

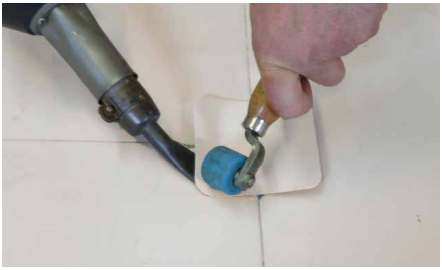
Video:
Vacuum Plate 100-LP

REPAIR



1. In the event of a damage of the Sarnafil® T / Sarnafil® AT roof waterproofing membranes the damaged area need to be cleaned, depending on the degree of soiling.

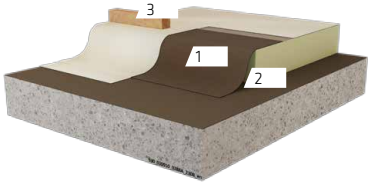
2. All membrane overlappings have to be chamfered.



3. Cut a suitable repair patch from Sarnafil® T / Sarnafil® AT roof waterproofing membrane and round off the corners (minimum size 100 x 100 mm), adjusted according to the size of the repair area).

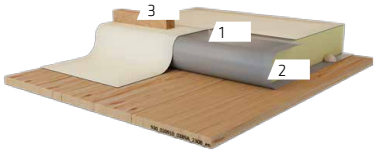
4. Weld the Sarnafil® T / Sarnafil® AT roof waterproofing membrane repair patch around the chamfered and damaged area.

DAY JOINTS



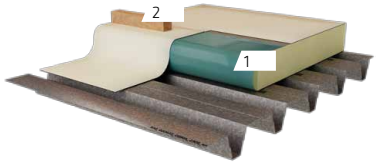
DAY JOINTS TO A BITUMINOUS VAPOUR BARRIER

- Adhere the bituminous vapour barrier strip (1) to the installed vapour barrier (2).
- Put weight (3) on the Sarnafil® T / Sarnafil® AT roof waterproofing membrane.



DAY JOINTS WITH VAPOUR BARRIER ON TOP OF A LEVEL DECK

- Adhere the vapour barrier (1) to the roof deck using a Sarnavap® sealing tape (2).
- Fold back the vapour barrier (1) over the thermal insulation.
- Put weight (3) on the Sarnafil® T / Sarnafil® AT roof waterproofing membrane.



DAY JOINTS WITH Sarnavap® VAPOUR CONTROL LAYER ON TOP OF TRAPEZOIDAL METAL DECK

- Fold back the Sarnavap® vapour control layer (1) over the thermal insulation.
- Put weight (2) on the Sarnafil® T / Sarnafil® AT roof waterproofing membrane.

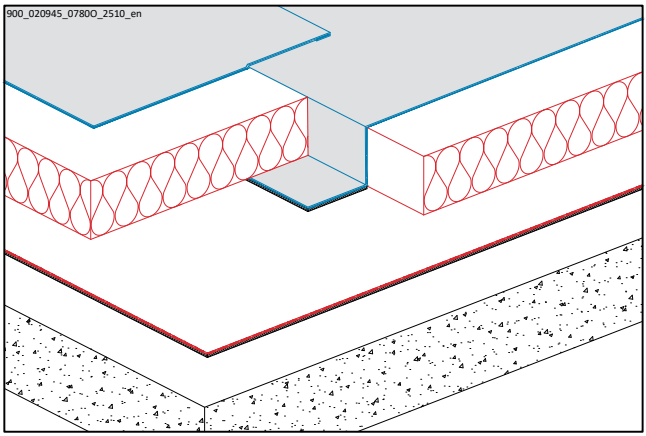
Remove the bituminous vapour barrrier strip (1) on the next day before work starts.
Day joints protect flat roof areas against water penetration when work is interrupted.

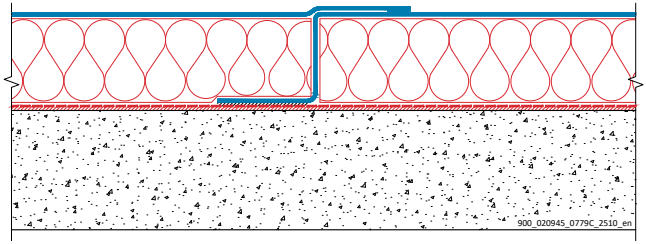
COMPARTMENTS

ROOF COMPARTMENTS WITH WATERSTOP SYSTEM

Waterstops form a watertight seal between the roof waterproofing membrane and the vapour barrier in order to minimize water damage in case of a leak. Waterstops are important safety components. Besides subdividing roofs into smaller areas, they separate special zones from the rest of the roof. Waterstops are installed to divide the roof into compartments.

Compartment size:
- 100 to 300 m²
(if the protective layer is difficult to remove)
- 300 to 600 m²
(If the protective layer is easy to remove)



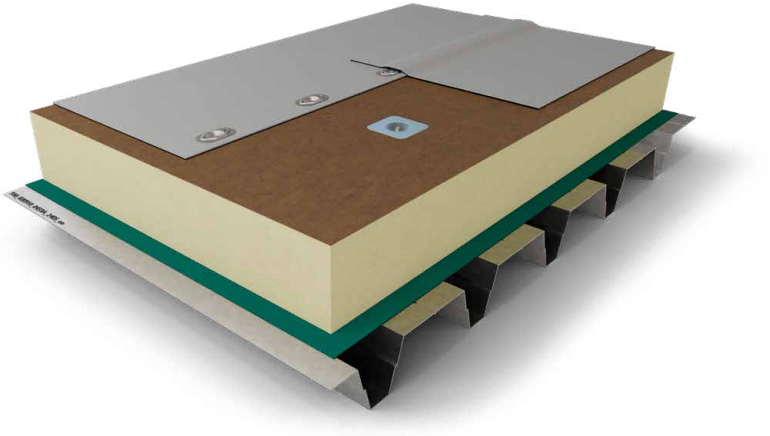


Connection of roof waterproofing membrane to vapour barrier

Type of roof waterprooofing membrane	Type of vapour barrier	Connection
Sarnafil® TS 77 **Sarnafil® TG 66** **Sarnafil® AT**	Sarnavap®-5000 E SA	Sarnatape®-20
	Sarnavap®-5000 E SA FR	Sarnatape®-20
	SikaRoof® Vap 4000 E SA FR	Sarnatape®-20
	SikaShield® VB E71 PE SA 3 kg/m²	Hot-air welding
	SikaShield® VB P41 S 3 mm	Hot-air welding
	SikaShield® VB P21 T 3 mm	Hot-air welding
	SikaShield® VB P42 S	Hot-air welding

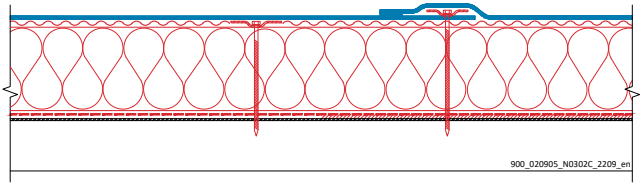
ROOF WATERPROOFING SYSTEMS

SPOT FASTENING

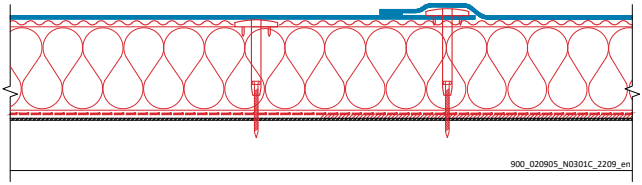


Exposed roofs with Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes can be mechanically fastened using the Sarnafast® spot fastening system. These lightweight systems meet all the requirements for modern flat roofing.

Sarnafast®
spot fastening system
using metal washers



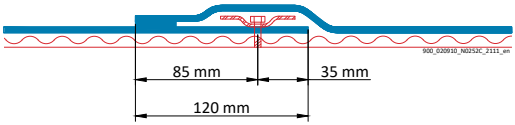
Sarnafast®
tube spot fastening system
using polyamide tubes

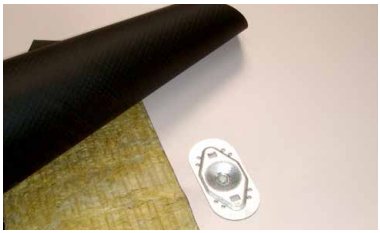


Fire protection layer
A fire protection layer S-Glass Fleece 120 g/m² to be installed above thermal insulation where it is required by fire regulation.

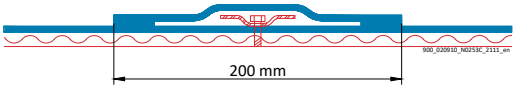
Thermal insulation fastening
Before the Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes are installed, the insulation boards must be secured to the roof deck using appropriate Sarnafast® fasteners and insulation washers. The number of fasteners must meet local regulations and building codes. The minimum is one fastener per insulation board or on fastener per m².

SPOT FASTENING

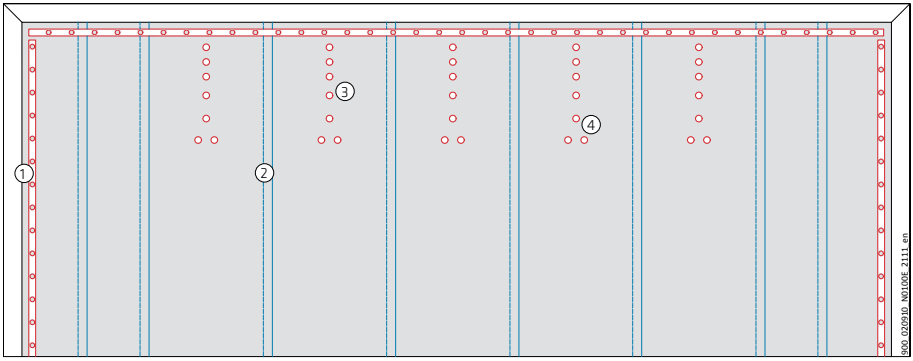




Sarnafil® TS 77 / Sarnafil® AT is fastened using the Sarnafast® fasteners and Sarnafast® washers / tubes along the marked line 35 mm from the edge of the membrane. Space the fasteners in accordance with project specifications by Sika. Unroll the next Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membrane, overlap by 120 mm along the marked line and weld.



In perimeter and corner areas where additional fastening is required, Sarnafast® fasteners and Sarnafast® washers / tubes are installed through the membrane (intermediate fastening). Space the fasteners in accordance with project specifications by Sika.
Cover the rows of Sarnafast® Fasteners with a 200 mm wide membrane cover strip and weld both sides.

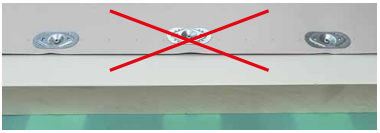


1 Perimeter securement Sarnabar® with Sarnafil® T Welding Cord
2 Sarnafast® spot fastening system along the edge of roof waterproofing membrane
3 Sarnafast® intermediate fastening system with cover strip
4 Row termination with two Sarnafast® fasteners and washers / tubes or Universal Row / Load Distribution Plate and at least two Sarnafast® fasteners and Sarnabar® tubes

SPOT FASTENING

With correctly anchored Sarnafast® fasteners, the Sarnafast® washers / tubes must be level with the Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes.

Sarnafast® fasteners and Sarnafast® washers / tubes must be installed with the Sarnafast® automatic setting tool or by means of an electric screw-driver with depth guide.



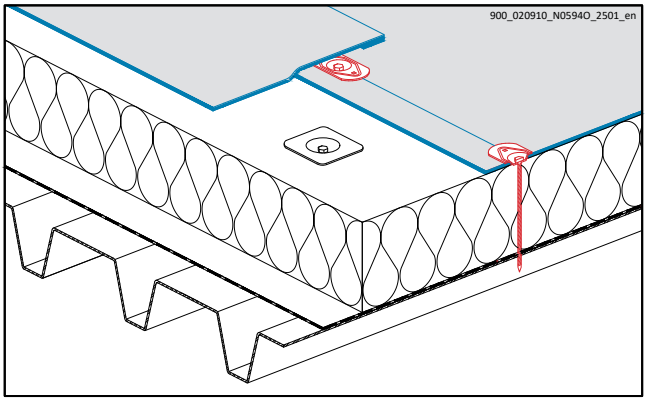
Incorrect positioning and / or setting of Sarnafast® fasteners and Sarnafast® washers / tubes will substantially reduce wind uplift resistance of the system.

Important Notes:

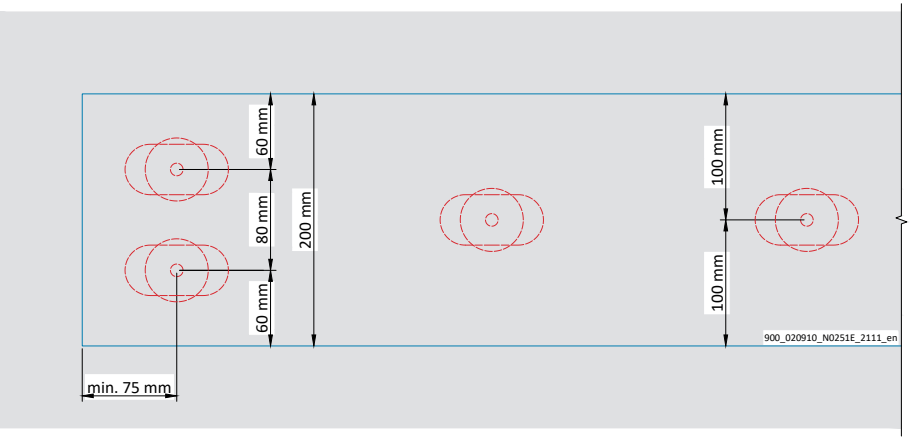
- All Sarnafast® fasteners must be fastened immediately after the Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes have been installed. Failure to do so may result in permanent membrane deformation.
- All welding on the flat roofing must be carried out with automatic welding machine.

Hand welding is only allowed for detail work.

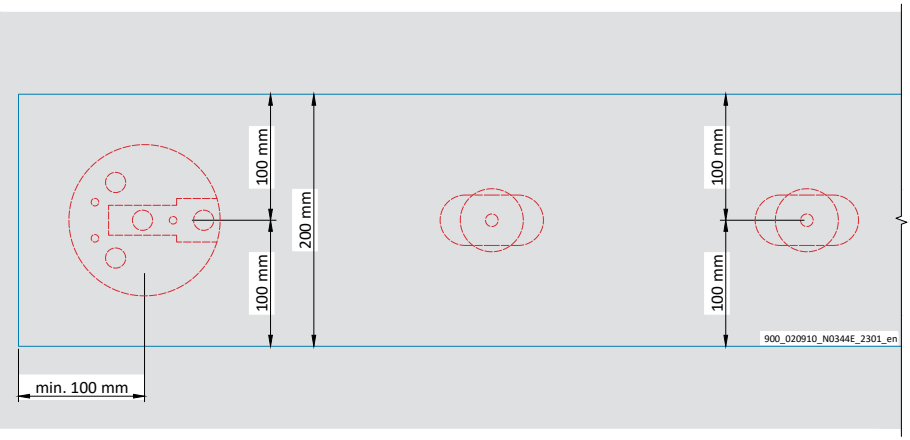
Fastening on trapezoidal metal decks into upper corrugation



SPOT FASTENING



Row termination of intermediate fastening with two Sarnafast® fasteners and washers / tubes and 200 mm wide cover strip.



Row termination of intermediate fastening with Universal Row / Load Distribution Plate and at least two Sarnafast® fasteners and Sarnabar® tubes and 200 mm wide cover strip.

Cover strip material Sarnafil® TS 77 / Sarnafil® AT welded on either side.

SPOT FASTENING

Sarnafast® Washer KTL

DESCRIPTION
Zinc plated steel washer with diamondshaped reinforcement and specially stamped barbs for the mechanical fastening of roof waterproofing membranes.

USES
Mechanically fastened roof waterproofing membranes by Sarnafast® spot fastening in overlaps and / or intermediate spot fastening in combination with Sarnafast® Fastener SBF-6.0 on all decks. Only for fastening roof waterproofing membranes over compressible thermal insulation (not for use on hard substrates).

Sarnafast® Washer KT

DESCRIPTION
Zinc plated steel washer with diamondshaped reinforcement and specially stamped barbs for the mechanical fastening of roof waterproofing membranes.

USES
Mechanically fastened roof waterproofing membranes by Sarnafast® spot fastening in overlaps and / or intermediate spot fastening in combination with Sarnafast® Fastener SF-4.8 on corrugated steel and plywood / OSB decks. Only for fastening roof waterproofing membranes over compressible thermal insulation (not for use on hard substrates).

Sarnafast® Tube SFT-50

DESCRIPTION
Polyamide tube (PA 6) with teeths for the mechanical fastening of roof waterproofing membranes.

USES
Mechanically fastened roof waterproofing membranes by Sarnafast® spot fastening in overlaps and / or intermediate spot fastening in combination with Sarnafast® Fastener SBF-6.0 on all decks. Only for fastening roof waterproofing membranes over compressible thermal insulation (not for use on hard substrate).

SPOT FASTENING

Sarnabar® Tube SBT-20

DESCRIPTION
Polyamide tube (PA 6) for the Universal Row / Load Distribution Plate fastening.

USES
Universal Row / Load Distribution Plate fastening in combination with Sarnafast® Fastener SBF-6.0 on all decks.

Universal Row / Load Distribution Plate

DESCRIPTION
Polyamide (PA 6) plate for the row termination in intermediate fastening of mechanically fastened roof system – spot fastening.

USES
The Universal Row / Load Distribution Plate is applied at the end of intermediate spot fastening of mechanically fastened roof system to absorb the concentrated wind uplift forces. This reduces the load peaks and therefore possible damages on the roof waterproofing membranes. The plate to be fastened with at least two Sarnafast® SF 4.8 on corrugated steel and plywood / OSB decks or at least two Sarnafast® SBF-6.0 on all decks and also with at least two Sarnabar® Tubes SBT-20 combined with two Sarnafast® SBF-6.0 on all decks.

SPOT FASTENING

Sarnafast® Fastener SBF-6.0

DESCRIPTION
Hardened carbon steel fastener.

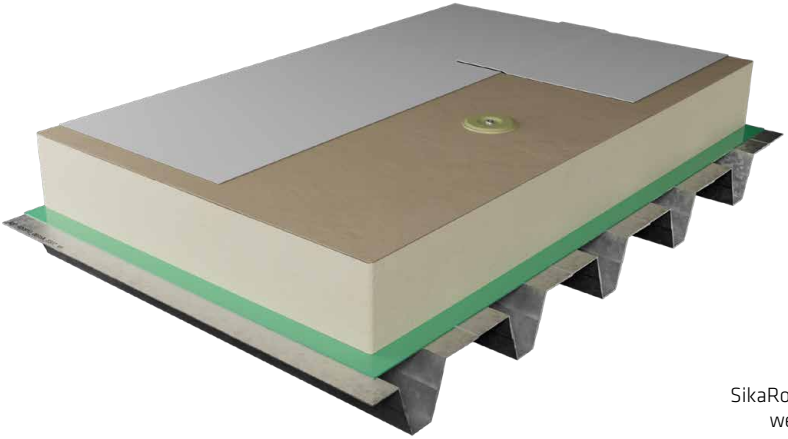
USES
Fastener in combination with Sarnafast® Washer KTL, Sarnafast® Tube SFT-50, Universal Row / Load Distribution Plate, and Sarnabar® Tube SBT-20 on corrugated steel, concrete and plywood / OSB decks.

Sarnafast® Fastener SF-4.8

DESCRIPTION
Hardened carbon steel fastener.

USES
Fastener in combination with Sarnafast® Washer KT and Universal Row / Load Distribution Plate on steel and plywood / OSB decks.

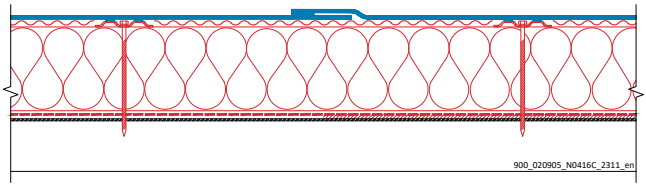
INDUCTION WELDING



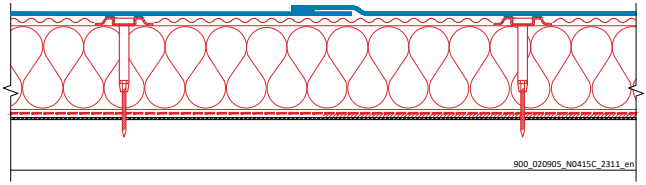
Video:
SikaRoof® induction welding system

Exposed roofs with Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes can be mechanically fastened using SikaRoof® induction welding system. These field fastening system uses induction technology and offers a non-penetrating membrane solution.

SikaRoof® induction welding system using metal discs



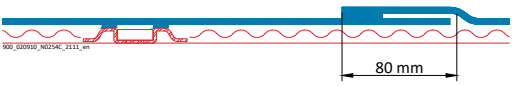
SikaRoof® tube induction welding system using polyamide tubes in combinaton with metal discs



Fire protection layer
A fire protection layer S-Glass Fleece 120 g/m² to be installed above thermal insulation where it is required by fire regulation.

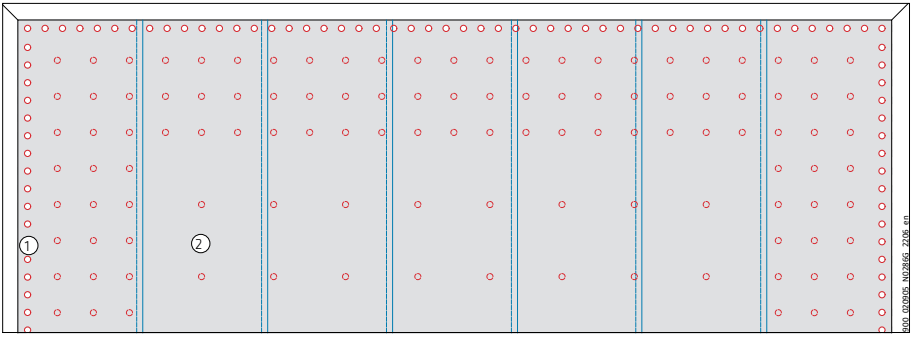
Thermal insulation or deck fastening
Before the Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes are installed, SikaRoof® induction welding system will be fixed into the insulation boards or directly to the roof deck according to the fasting layout.

INDUCTION WELDING



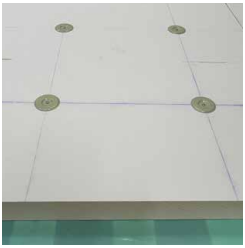
Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes are fastened using Sarnafast® fastener and SikaRoof® induction welding discs with or without Sarnabar® tubes. Membrane must be overlapped by 80 mm and hot-air welded.

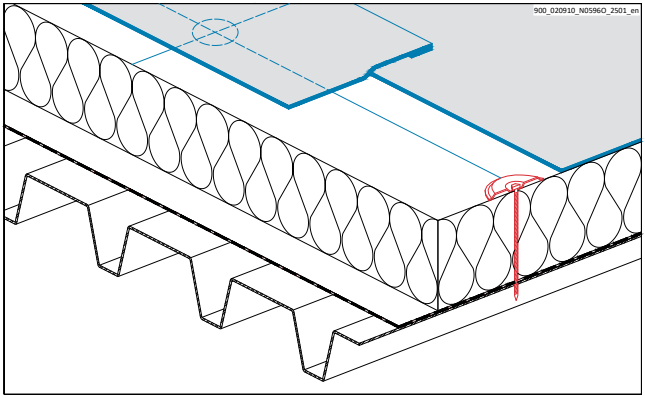
With correctly anchored Sarnafast® fastener, the SikaRoof® induction welding discs with or without Sarnabar® tubes must be level with the Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes.



1 Perimeter securement Sarnabar® with Sarnafil® T Welding Cord or SikaRoof® induction welding
2 SikaRoof® induction welding system

Fastening on trapezoidal metal decks into upper corrugation





INDUCTION WELDING

Sarnabar® Tube SBT-20

DESCRIPTION
Polyamide tube (PA 6) for induction welding fastening.

USES
Tube induction welding system in combination with SikaRoof® Induction Welding Disc FPO 16.0 and Sarnafast® Fastener SBF-6.0 on all decks.

SikaRoof® Induction Welding Disc FPO 6.8

DESCRIPTION
Zinc plated steel fastening discs with a green coloured hot melt adhesive coating for induction welding with Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes.

USES
Mechanically field fastening of Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes on thermal insulation or hard substrates by induction welding to the membrane in combination with Sarnafast® Fastener SBF 6.0 on all decks.

SikaRoof® Induction Welding Disc FPO 16.0

DESCRIPTION
Zinc plated steel fastening discs with a green coloured hot melt adhesive coating for induction welding with Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes.

USES
Mechanically field fastening of Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes only over compressible thermal insulation (not for use on hard substrates) by induction welding to the membrane in combination with Sarnafast® Fastener SBF 6.0 and Sarnabar® Tube SBT-20 on all decks.

INDUCTION WELDING

SikaRoof® Induction Cardboard Pad

DESCRIPTION
Cardboard pad.

USES
SikaRoof® Induction Cardboard Pad must be used on top of EPS / XPS thermal insulation directly placed under SikaRoof® Induction Welding Disc FPO 6.8 or 16.0. Preventing the thermal insulation from melting during the induction welding process.

Sarnafast® Fastener SBF-6.0

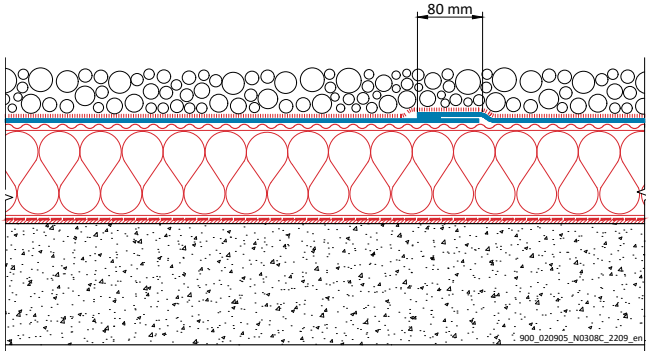
DESCRIPTION
Hardened carbon steel fastener.

USES
Fastener in combination with SikaRoof® Induction Welding Disc FPO 6.8 or 16.0 and Sarnabar® Tube SBT-20 on corrugated steel, concrete and plywood / OSB decks.

GENERAL TYPES OF SYSTEMS

In ballasted roof systems loose laid Sarnafil® TG 66 / Sarnafil® AT roof waterproofing membranes are used. The membranes should be unrolled flat without waves or creases and be positioned to overlap by 80 mm. The overlapping membranes must be welded immediately (on the same working day) and the loose laid Sarnafil® TG 66 / Sarnafil® AT roof waterproofing membranes ballasted as soon as possible.

- Gravel Ballasted Roof System
- Inverted Roof System
- Utility Roof System
- Green Roof System



GRAVEL BALLASTED ROOF SYSTEM

INVERTED ROOF SYSTEM

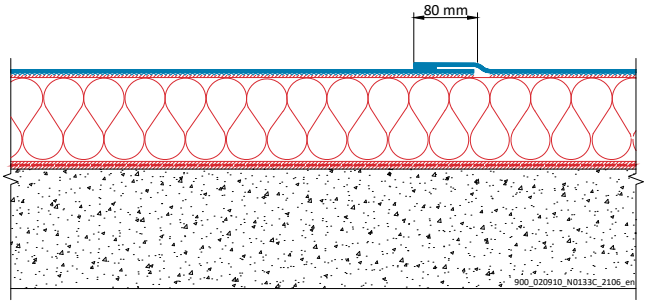
UTILITY ROOF SYSTEM

GREEN ROOF SYSTEM

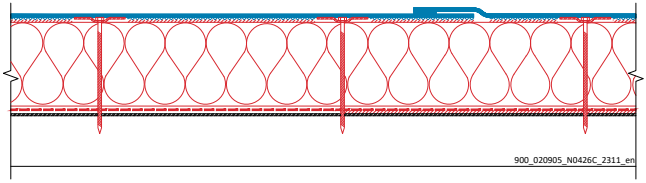
GENERAL TYPES OF SYSTEMS

This system is designed to fulfil the highest aesthetic requirements! The membranes can be adhered to flat, curved or sloped roof of practically any shape and configuration.

Roof waterproofing membranes adhered with adhesive or self adhered membranes to the substrate underneath. All other layers to be adhered to each other.



Roof waterproofing membranes adhered with adhesive or self adhered membranes to the substrate underneath.
Vapour control layer loose laid or vapour barrier self adhered or torch applied and mechanically fasten of thermal insulation onto roof deck.



ADHERING Sarnafil® TG 76 Felt PS WITH Sarnacol® 2142 S

Precondition:
Substrate must be clean, dry and if needed primed with designated primer solution.
In this sequence in combination with mechanically fastened thermal insulation.

1. Fully roll-out the Sarnafil® TG 76 Felt PS roof waterproofing membrane and aligne in the correct position to already installed roof waterproofing membrane or parapet / upstand.

2. Welding overlap of 6 – 8 cm needs to be tightened to the next membrane to ensure full adhesion.

3. Apply markings along the laid-out membrane.

4. Fold back at least 50 % of the membrane roll.

5. Prepare roller and adhesive Sarnacol®-2142 S.

6. Apply Sarnacol®-2142 S with a roller evenly over the exposed substrate on the area where the membrane will be applied.

ADHERING Sarnafil® TG 76 Felt PS WITH Sarnacol® 2142 S

7. Wait until the adhesive get tacky.

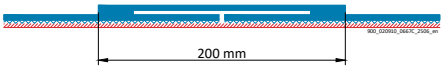
8. Roll in the membrane into the wet adhesive.

9. Roll back the second half of the Sarnafil® TG 76 Felt PS roof waterproofing membrane and repeat the procedure.

10. After the membrane is applied, use heavy roller to press down the membrane properly to the substrate.

11. Hot-air weld the adhered Sarnafil® TG Felt PS sheets overlap joints.

Layouting:
Butt joints should be covered with a 200 mm wide Sarnafil® TG 66 cover strip welded on either side.



Attention:
Bonding strength is dependent on ambient temperature and air humidity. Ensure that the bond is sufficiently strong before welding.

ADHERING Sarnafil® TG 76 FSA / Sarnafil® AT FSA

Precondition:
Substrate must be clean, dry and if needed primed with designated primer solution.
In this sequence in combination with mechanically fastened thermal insulation.

1. Fully roll-out the Sarnafil® TG 76 FSA / Sarnafil® AT FSA roof waterproofing membrane and aligne in the correct position to already installed membrane or parapet / upstand.

2. Fold back at least 50 % of the membrane.

3. Cut release line with a sharp cutter (do not cut the membrane).

4. Fold back release liner on the lower end 5 – 10 cm.

5. Start to peel off upper release liner to peel and stick the membrane.

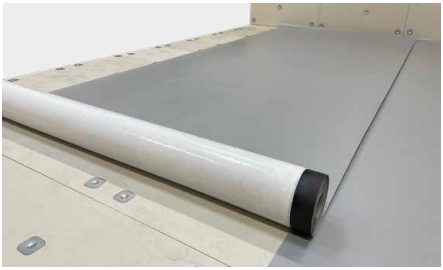
6. Fold back second half of non adhered Sarnafil® TG 76 FSA / Sarnafil® AT FSA roof waterproofing membrane roll.

ADHERING Sarnafil® TG 76 FSA / Sarnafil® AT FSA

7. Fold back.

8. Start to peel off release liner to peel and stick the membrane.

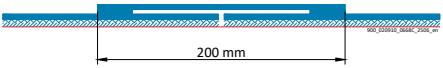
9. After the membrane is applied, use heavy roller to press down the membrane properly to the substrate.



10. Welding overlap of 6 - 8 cm needs to be tightened to the next membrane to ensure full adhesion.

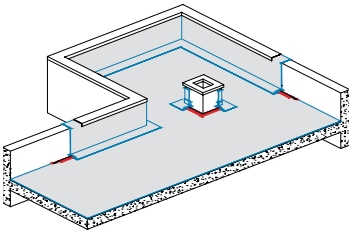
11. Weld the adhered Sarnafil® TG 76 FSA / Sarnafil® AT FSA roof waterproofing membrane sheets overlap joints.

Layouting:
Butt joints should be covered with a 200 mm wide Sarnafil® TG 66 or Sarnafil® AT cover strip welded on either side.

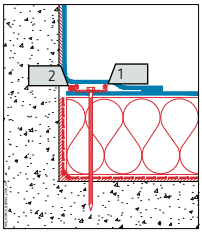


Attention:
Bonding strength is dependent on ambient temperature and air humidity. Ensure that the bond is sufficiently strong before welding.

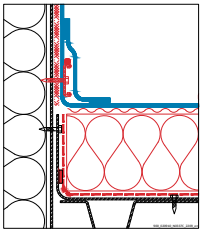
MECHANICALLY FASTENED AND BALLASTED



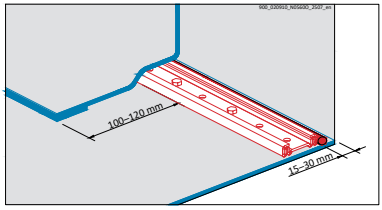
Sarnabar® PERIMETER SECUREMENT
All flashings, terminations and penetrations of mechanically fastened and ballasted systems must be secured mechanically using Sarnabar®.



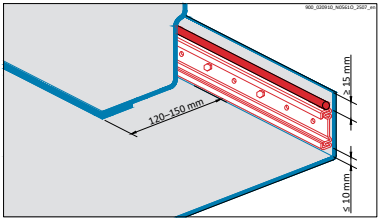
Sarnabar® SECUREMENT IN ROOF DECK
The Sarnabar® must be anchored using suitable fasteners into the roof deck.
Sarnabar® types 6, 6/10, 6/15 (1) with at least 4 fasteners per meter must be used. In addition a Sarnafil® T Welding Cord of 4 mm diameter (2) must be welded to the side of the fastening bar facing towards the upstand. The welding cord secures the membrane against tearing by thermal construction.



Sarnabar® SECUREMENT IN UPSTAND
The Sarnabar® can also be anchored into the transition area of the upstand by using suitable fasteners. If the roof structure in the upstand area is not strong enough (e.g. timber planking, aerated concrete, thin metal sheets, skylight frames etc.) the fastening may be anchored into the roof deck.



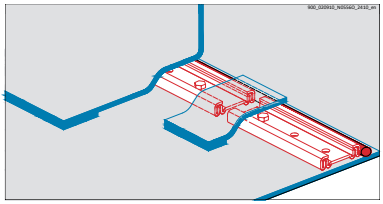
Sarnabar® SECUREMENT IN ROOF DECK



Sarnabar® SECUREMENT IN UPSTAND

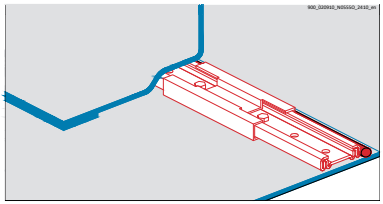
MECHANICALLY FASTENED AND BALLASTED

Bar ends of Sarnabar® need to be protected before roof waterproofing membranes will be installed.



VERSION 1

Leave a 10 mm clearance between bar ends. Do not fasten in hole nearest bar end. Cover the bar ends with a piece of Sarnafil® T / AT membrane and weld in in place.

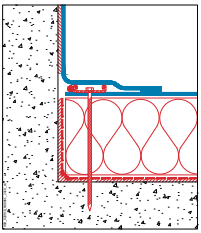


VERSION 2

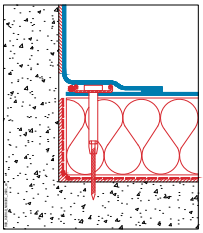
Cover the bar with the Sarnabar® Connection Clip.

FASTENING DENSITY PERIMETER SECUREMENT

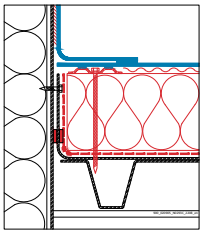
Substrate	Insulation thickness				
	≤ 160 mm	160 – 200 mm	201 – 240 mm	241 – 400 mm	≥ 400 mm
All substrates excl. aerated or lightweight concrete	4 fasteners or tubes / m[1]	5 fasteners or tubes / m[1]	6 fasteners or tubes / m[1]	7 tubes / m[1]	special design measures to be taken
Aerated or lightweight concrete	5 fasteners or tubes / m[1]	6 fasteners or tubes / m[1] and 8 fasteners or tubes / m[1] in the corner zone	special design measures to be taken	special design measures to be taken	special design measures to be taken



Using Sarnabar® with fasteners

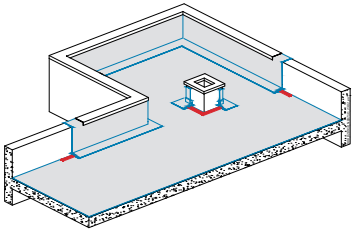


Using Sarnabar® with fasteners and tubes

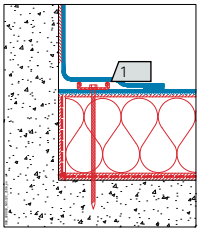


Using induction welding discs and fasteners

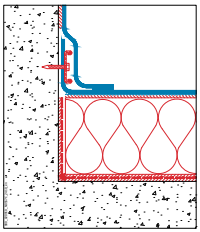
ADHERED



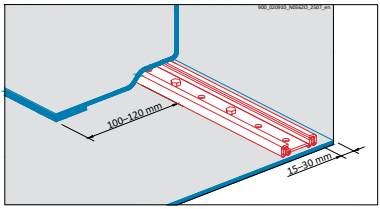
Sarnabar® PERIMETER SECUREMENT / PEEL STOP
All flashings, terminations and penetrations of adhered roof systems must be secured mechanically using Sarnabar®.



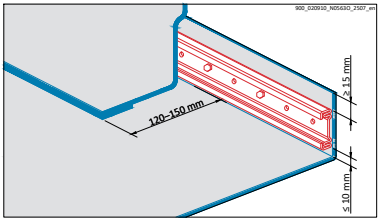
Sarnabar® SECUREMENT / PEEL STOP IN ROOF DECK
The Sarnabar® must be anchored using suitable fasteners into the roof deck. Sarnabar® types 6, 6/10, 6/15 (1) with at least 4 fasteners per meter must be used.



Sarnabar® SECUREMENT / PEEL STOP IN UPSTAND
The Sarnabar® can also be anchored into the transition area of the upstand by using suitable fasteners. If the roof structure in the upstand area is not strong enough (e.g. timber planking, aera concrete, thin metal sheets, skylight frames etc.) the fastening may be anchored into the roof deck.



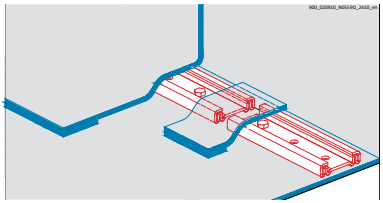
Sarnabar® SECUREMENT / PEEL STOP IN ROOF DECK



Sarnabar® SECUREMENT / PEEL STOP IN UPSTAND

ADHERED

Bar ends of Sarnabar® need to be protected before roof waterproofing membranes will be installed.



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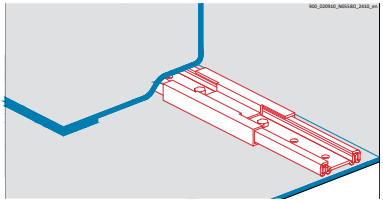
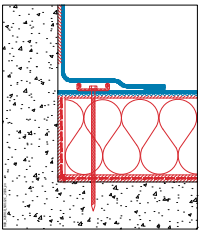


VERSION 2

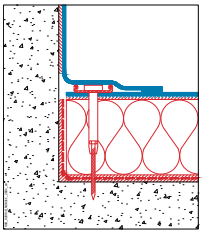
Cover the bar with the Sarnabar® Connection Clip.

FASTENING DENSITY PERIMETER SECUREMENT

Substrate	Insulation thickness				
	≤ 160 mm	160 – 200 mm	201 – 240 mm	241 – 400 mm	≥ 400 mm
All substrates excl. aerated or lightweight concrete	4 fasteners or tubes / m^1	5 fasteners or tubes / m^1	6 fasteners or tubes / m^1	7 tubes / m^1	special design measures to be taken
Aerated or lightweight concrete	5 fasteners or tubes / m^1	6 fasteners or tubes / m^1 and 8 fasteners or tubes / m^1 in the corner zone	special design measures to be taken	special design measures to be taken	special design measures to be taken



Using Sarnabar® with fasteners



Using Sarnabar® with fasteners and tubes

MECHANICALLY FASTENED, BALLASTED AND ADHERED ACCESSORIES

Sarnabar® Fastening Profiles

DESCRIPTION
Folded profile hot-dip coated steel for the perimeter fastening.

USES
Perimeter fastening system in combination with Sarnafast® SF 4.8 into corrugated steel and plywood / OSB decks or Sarnafast® SBF-6.0 on all decks. Also with specific Sarnabar® Fastening Profile 6/15, Sarnabar® Tube SBT-20 and Sarnafast® SBF-6.0 on all decks.

Sarnabar® Connection Clip

DESCRIPTION
Polyamide clip (PA 6).

USES
Connecting of Sarnabar® Fastening Profiles.

Sarnafil® T Welding Cord

DESCRIPTION
Cord made of FPO compound by extruding procedure.

USES
In combination with Sarnabar® Fastening Profiles preventing the membranes from slipping.

Sarnabar® Tube SBT-20

DESCRIPTION
Polyamide tube (PA 6).

USES
Tube perimeter fastening in combination with SikaRoof® Induction Welding Disc FPO 16.0 or Sarnabar®Fastening Profile 6/15 and Sarnafast® Fastener SBF-6.0 on all decks.

MECHANICALLY FASTENED, BALLASTED AND ADHERED ACCESSORIES

SikaRoof® Induction Welding Disc FPO 6.8

DESCRIPTION
Zinc plated steel fastening discs with a green coloured hot melt adhesive coating for induction welding with Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes.

USES
Mechanically perimeter fastening of Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes on thermal insulation or hard substrates by induction welding to the membrane in combination with Sarnafast® Fastener SBF 6.0 on all decks.

SikaRoof® Induction Welding Disc FPO 16.0

DESCRIPTION
Zinc plated steel fastening discs with a green coloured hot melt adhesive coating for induction welding with Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes.

USES
Mechanically perimeter fastening of of Sarnafil® TS 77 / Sarnafil® AT roof waterproofing membranes only over compressible thermal insulation (not for use on hard substrates) by induction welding to the membrane in combination with Sarnafast® Fastener SBF 6.0 and Sarnabar® Tube SBT-20 on all decks.

SikaRoof® Induction Cardboard Pad

DESCRIPTION
Cardboard pad.

USES
SikaRoof® Induction Cardboard Pad must be used on top of EPS / XPS thermal insulation directly placed under SikaRoof® Induction Welding Disc FPO 6.8 or 16.0. Preventing the thermal insulation from melting during the induction welding process.

MECHANICALLY FASTENED, BALLASTED AND ADHERED ACCESSORIES

Sarnafast® Fastener SBF-6.0

DESCRIPTION
Hardened carbon steel fastener.

USES
Fastener in combination with Sarnabar® Fastening Profile and Sarnabar® Tube SBT-20 on corrugated steel, concrete and plywood / OSB decks.

Sarnafast® Fastener SF-4.8

DESCRIPTION
Hardened carbon steel fastener.

USES
Fastener in combination Sarnabar® Fastening Profile on steel and plywood / OSB decks.

LEVELLING-, PROTECTION-, SEPARATION-, FIRE-, FILTER-, SLIP- AND DRAINAGE LAYERS

PRODUCT OVERVIEW – LEVELLING- AND PROTECTION LAYERS

Product	S-Felt A-300	SikaRoof® Felt M 500 PP	S-Felt S-800
Function	Levelling- and Protection Layer	Levelling- and Protection Layer	Levelling- and Protection Layer
Properties			
Base material	Polypropylene (PP)	Polypropylene (PP)	Polypropylene (PP)
Weight (g/m²)	300	500	800
Roll size (m)	2 × 50	2 × 25	2 × 25
Resistance			
UV irradiation			
Bitumen	●	●	●
Alkaline solutions (ph 12)	●	●	●
Heat (+60 °C)	●	●	●
Practical application			
Bitumen new or aged	○	●	●
PVC aged	●	●	●
Concrete	●	●	●

●● Most suitable
● Suitable
○ Conditionally suitable

LEVELLING- AND PROTECTION LAYERS

S-Felt A-300

DESCRIPTION
S-Felt A-300 is a levelling- and protection layer made of polypropylene (PP).

USES
Levelling- and protection layer between Sarnafil® T / Sarnafil® AT roof waterproofing membranes and rough surfaces.

SikaRoof® Felt M 500 PP

DESCRIPTION
SikaRoof® Felt M 500 PP is a levelling- and protection layer made of polypropylene non woven fabric.

USES
Levelling- and protection layer between Sarnafil® T / Sarnafil® AT roof waterproofing membranes and rough surfaces.

S-Felt S-800

DESCRIPTION
S-Felt S-800 is a levelling- and protection layer made of polypropylene (PP).

USES
Levelling- and protection layer between Sarnafil® T / Sarnafil® AT roof waterproofing membranes and rough surfaces.

PRODUCT OVERVIEW – LEVELLING-, PROTECTION-, SEPARATION-, FIRE-, FILTER- AND SLIP LAYERS

Product	S-Felt T-300	S-Glass Fleece-120	S-Felt VS-140	S-Felt GK-400
Function	Separation-, Levelling- and Protection Layer	Separation- and Fire Protection Layer	Filter Layer	Protection- and Slip Layer
Properties				
Base material	Polyester (PES)	Glass fibre	Polypropylene (PP)	Polypropylene with PE film (PP / PE
Weight (g/m²)	300	120	140	400
Roll size (m)	2 × 50	2 × 100	2 × 50	2 × 50
Resistance				
UV irradiation	●			
Bitumen	●	●	●	●
Alkaline solutions (ph 12)	○		●	●
Heat (+60 °C)	●	●	●	●
Practical application				
Bitumen new or aged	●●			○
PVC aged	●			○
Concrete				○
Inverted roof system with XPS				
Filter Layer			●●	
Protection- and Slip Layer				●●

●● Most suitable
● Suitable
○ Conditionally suitable

LEVELLING-, PROTECTION-, SEPARATION-, FIRE-, FILTER- AND SLIP LAYERS

S-Felt T-300

DESCRIPTION
S-Felt T-300 is a separation-, levelling- and protection layer made of polyester (PES).

USES
S-Felt T-300 is used as a separation-, levelling- and protection layer between Sarnafil® T / Sarnafil® AT roof waterproofing membranes and incompatible substrates. S-Felt T-300 can also be used as a protection layer between Sarnafil® T / Sarnafil® AT roof waterproofing membranes and any protective topping or pavement.

S-Glass Fleece-120

DESCRIPTION
S-Glass Fleece-120 is a glass fibre separation- and fire protection layer.

USES
Separation- and fire protection layer between Sarnafil® T / Sarnafil® AT roof waterproofing membranes and EPS / XPS thermal insulation.

S-Felt VS-140

DESCRIPTION
S-Felt VS-140 is a filter layer made of polypropylene (PP)

USES
Filter layer in inverted roofs systems to prevent small particles from penetrating gaps and voids in the thermal insulation layer.

S-Felt GK-400

DESCRIPTION
S-Felt GK-400 is a protection- and slip layer made of polypropylene (PP) with a polyethylene (PE) coating on one side.

USES
Protection- and slip layer beneath paving or poured cementitious toppings.

PROTECTION-, DRAINAGE- AND FILTER LAYERS

S-Protection Sheet RS

DESCRIPTION
S-Protection Sheet RS is made of technical-grade recycled rubber granulate, polyurethane-bonded.

USES
S-Protection Sheet RS is a versatile protection layer on flat roofs and building structures.

Aquadrain 550

DESCRIPTION
Aquadrain 550 is made of mechanically strengthened Polypropylene (PP) fibres.

USES
Aquadrain 550 is used as drainage-, water retention- and protection layer for extensive and intensive green roof systems with a minimal slope of 1.50 %.

SikaRoof® Drainage Layer 20L2F

DESCRIPTION
SikaRoof® Drainage Layer 20L2F comprises of a threedimensional composite polymer drainage core connected to a fleece filter (PP) on both sides.

USES
SikaRoof® Drainage Layer 20L2F is used as a drainage-, filter- and protection layer for extensive and intensive green roof systems.

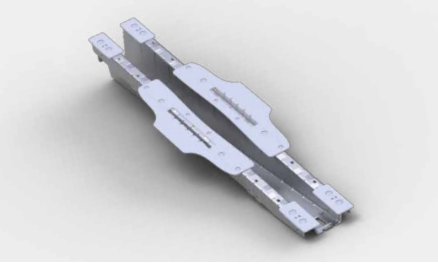
DETAILING

SikaRoof® SOLAR MOUNT-2 SYSTEM (SSM2)

Steps 1. – 8. should be done on a "pre-assembly table". The pre-assembled mounts are then ready for installation on the Sarnafil® T / Sarnafil® AT roof waterproofing membranes.

1. Making the SikaRoof® Mount-2 ready for installation.

2. Attaching the SikaRoof® Clicks FPO. According to the layout and design of the project, the SikaRoof® Clicks FPO are hooked into the lateral recesses of the mounts (one on each side of every mount).



3. Attaching the SikaRoof® Base Pads FPO according to project layout. The SikaRoof® Base Pads FPO are put into the recesses on the underside of the SikaRoof® Mount-2, four base pads per mount.

4. A metal bracket, matching the shape of the SikaRoof® Click FPO, is is placed onto each SikaRoof® Click FPO and fixed with two screws, tighten with a torque of 5 Nm.

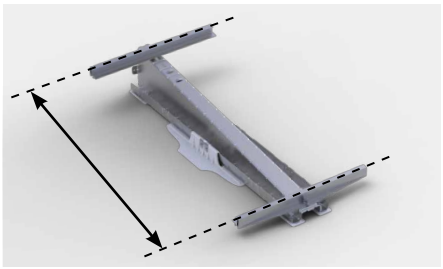
Note:
The recess on the bracket must face outward.

SikaRoof® SOLAR MOUNT-2 SYSTEM (SSM2)

5. Insert the hammer head of the Special T-Bolt 30 mm into the lower long hole of the SikaRoof® Mount-2.

6. Rotate the Short Insertion Rail by aligne precisely.

7. Initial positioning: Temporarily place the Short Insertion Rail in the lowest slot. If the photovoltaic module cannot be inserted, move the lower rail upward by approximately 3 cm and retry. Once correct, tighten with a torque of 30 Nm.

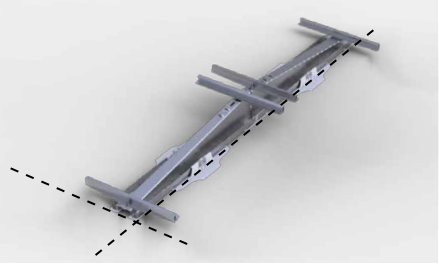


8. Once the correct lower Short Insertion Rail position is confirmed, install all lower rails. Install the upper Short Insertion Rail on the high end of the SikaRoof® Mount-2 and tighten manually.

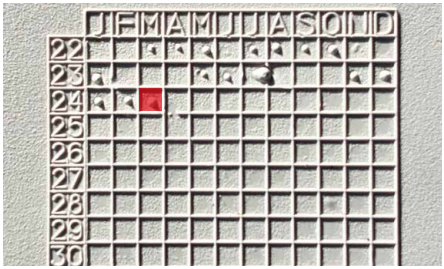
9. Prepare a second SikaRoof® Mount-2 and align both with higher ends facing each other.

10. Connect SikaRoof® Mount-2 using EW connection hexagon serrated flange bolts, tighten with a torque of 6.5 Nm.

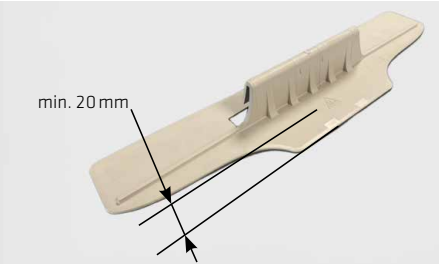
SikaRoof® SOLAR MOUNT-2 SYSTEM (SSM2)



11. Position the first SikaRoof® Mount-2 pair according to chalk lines (black). Follow job-site drawings.



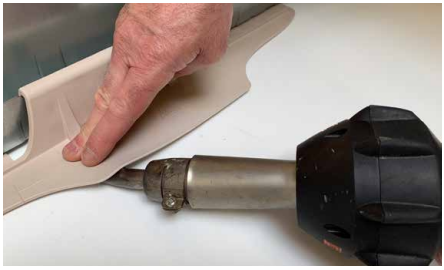
12. Clean roof waterproofing membrane surfaces with Sarnafil® T Prep. If SikaRoof® Click FPO is older than one year, pre-clean with Sarnafil® T-Clean. Production date as per picture March 2024. Please also refer to page 64 of the manual.



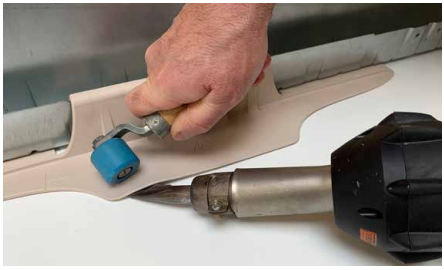
13. Minimum hot-air welded overlap must be 20 mm.

Note:
Always perform a test weld, see step 17.

14. Preferred welding to be done with semi-automatic Leister Unidrive 500.
Settings: 480 °C, 1.80 m / min.



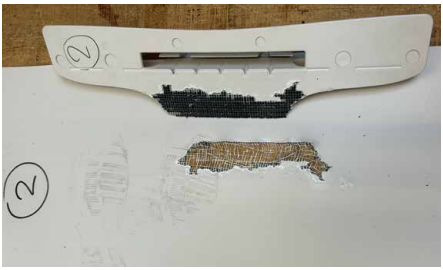
15a. Manual welding; spot- and pre-weld and leave 25 mm opening for the final weld.



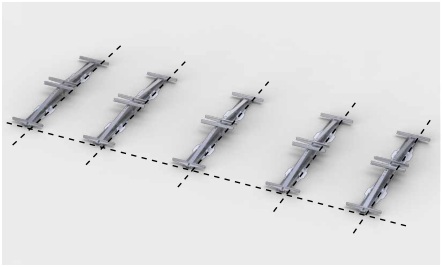
15b. Final weld: Use roller across 280 mm segment. Basic temperature setting for Leister Triac AT / ST: 280 – 320 °C.

SikaRoof® SOLAR MOUNT-2 SYSTEM (SSM2)

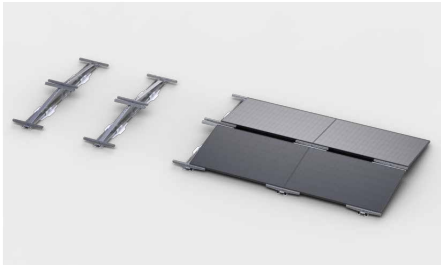
15c. Welding area on the SikaRoof® Click FPO indicated by arrows (red circles).



16. Perform test welds according to page 75 of the manual. Seams must not separate; tearing must occur outside the welded seams.



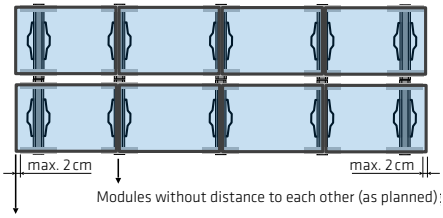
17. Install remaining SikaRoof® Mount-2 pairs along chalk lines. Mounts must be perfectly parallel. Outer spacing is 30 cm smaller than inner spacing.



18. Install photovoltaic modules. No space between the photovoltaic modules is required. The correct alignment for over / under spacing is described as follow.

It is not a realistic expectation that the mounts can be installed and welded with a precision of a few millimeters. Therefore, these are the options on how these imperfections can be compensated:

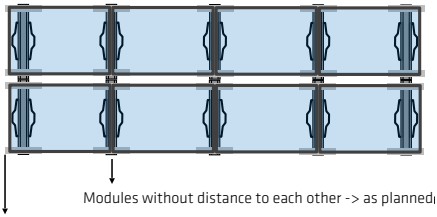
Spacing between mounts is **too small** (the distance from mount to mount is smaller than planned).



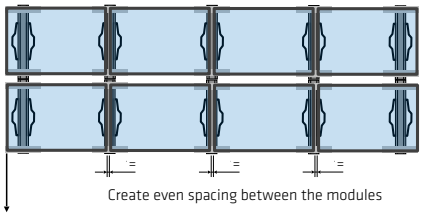
Solution:
The narrow edges of the modules protrude evenly and slightly beyond the short rails on both sides (maximum 2 cm).

SikaRoof® SOLAR MOUNT-2 SYSTEM (SSM2)

Spacing between mounts is **too large** (the distance from mount to mount is larger than planned).

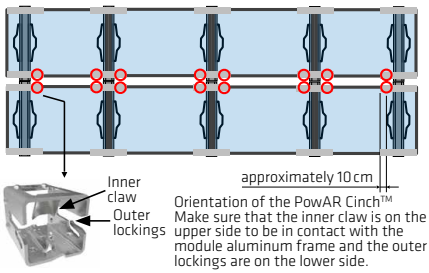


In no case, the rails should protrude over the short photovoltaic module edges.

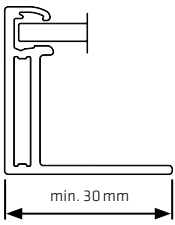


Solution:
The narrow edges of the modules end flush with the ends of the short rails.

19. Tighten upper Short Insertion Rail downward to secure module frames.Tighten with a torque of 30 Nm. No gap allowed.



20. Each module is secured laterally with two SikaRoof® Module Clip 248217 clamps, placed approximately 10 cm from rail ends.



Photovoltaic module cross section:

21. Finished photovoltaic array SikaRoof® Solar Mount-2 system.

SikaRoof® SOLAR MOUNT-2 SYSTEM (SSM2)

SikaRoof® Mount-2, stamped sheet steel overall dimensions 1280 mm by 176 mm by 195 mm, 7 ° angle

SikaRoof® Click FPO

SikaRoof® Base Pads FPO

Stainless steel Screws Ø5 x 30 mm and stainless steel Bracket

Short Insertion Rail 600 mm (aluminium) for 30 or 35 mm frame

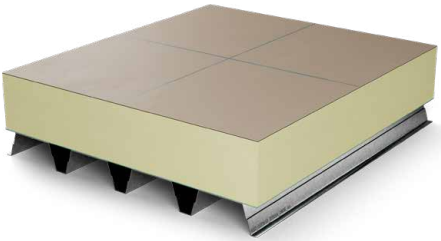
Stainless steel Special T-Bolt Nut M12 and stainless steel Special T-Bolt 30 mm

SikaRoof® SOLAR MOUNT-2 SYSTEM (SSM2)

EW Connection hexagon serrated flange Nut M6 and EW Connection hexagon serrated flange Screw 10 mm

SikaRoof® Module Clip 248217

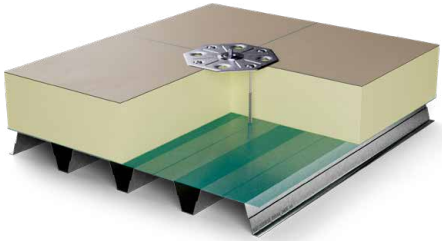
SikaRoof® ANCHOR SYSTEM



1. Mark the correct position of the SikaRoof® Anchor Washer 140 (fastener plate) on the Sarnafil® T / Sarnafil® AT roof waterproofing membranes according to the layout plan.

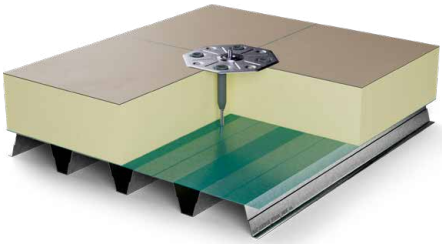
2. Place the SikaRoof® Anchor Washer 140 on the marking line.

3. Fasten the SikaRoof® Anchor Washer 140 with the appropriate fasteners.

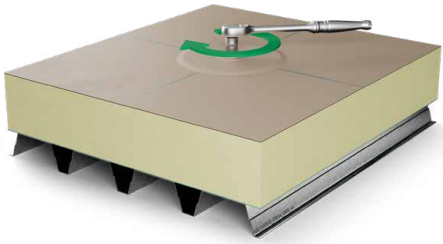


4. Sarnafast® Fastener SBF 6.0 x length.

SikaRoof® ANCHOR SYSTEM



5. Sarnabar® Tube SBT-20 x length and Sarnafast® Fastener SBF 6.0 x length.



6. Screw-on the SikaRoof® Anchor 250 CR FPO on the SikaRoof® Anchor Washer 140 and tighten with a spanner no. 19.

7. Clean the Sarnafil® T / Sarnafil® AT roof waterproofing membranes (marking lines) in the area of the hot-air welding seam.

8. Hot-air weld the SikaRoof® Anchor 250 CR FPO onto the Sarnafil® T / Sarnafil® AT roof waterproofing membranes.

SikaRoof® ANCHOR SYSTEM

SikaRoof® Anchor 250 CR FPO and SikaRoof® Anchor Washer 140

DESCRIPTION
SikaRoof® Anchor 250 CR FPO and SikaRoof® Anchor Washer 140 are a manufactured preformed accessory providing a secure watertight connection directly between the roof substructure / roof deck and roof waterproofing membrane.

USES
SikaRoof® Anchor 250 CR FPO and SikaRoof® Anchor Washer 140 is an universal connection point for fixing roof mounted products to exposed Sarnafil® T / Sarnafil® AT roof waterproofing membranes.

Sarnabar® Tube SBT-20

DESCRIPTION
Polyamide tube (PA 6) for the SikaRoof® Anchor Washer 140 fastening.

USES
SikaRoof® Anchor Washer 140 fastening in combination with Sarnafast® Fastener SBF-6.0.

SikaRoof® ANCHOR SYSTEM

Sarnafast® Fastener SBF-6.0

DESCRIPTION
Hardened carbon steel fastener.

USES
Fastener in combination with SikaRoof® Anchor Washer 140 and tube option Sarnabar® Tube SBT-20 on corrugated steel, concrete and plywood / OSB decks.

Brochure:
SikaRoof® Anchor System

Brochure:
SikaRoof® Anchor System in Combination with Solar Roof System

Video:
SikaRoof® Anchor System in combination with Lifted Solar System

Sarnafil® T WALKWAY PADS

Sarnafil® T Walkway Pad

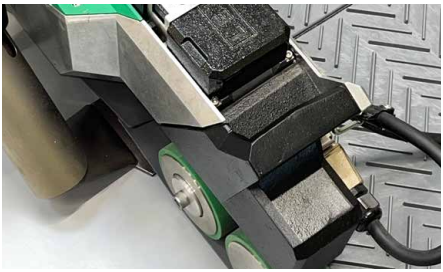
DESCRIPTION
Sarnafil® T Walkway Pad is made of premium-quality flexible polyolefin (FPO) by injection moulding procedure.

USES
Sarnafil® T Walkway Pads are used to provide a durable walkway for roof maintenance or access on any Sarnafil® T / Sarnafil® AT roofing systems.

1. Mark a line in the direction of the installation.

2. Lay the Sarnafil® T Walkway Pads along the marked line and move against the two spacers. Overlap the tabs in the running direction of the welding machine.

3. At the end or a turn of the walkway the tabs of the overlap can be trimmed.



4. Supervise welding from the walkway pad side.

Sarnacol® T-660 APPLICATION

1.

- Sarnacol® T-660 is applied evenly with a brush or roller to the substrate. Allow the - Absorbent substrates require two coats of adhesive.
- Allow the adhesive to dry completely before the second coating is applied.
- Allow an evaporation time of minimum two hours and maximum 10 hours.
- If Sarnacol ® T-660 is allowed to dry for more than 10 hours, an additional coating of Sarnacol® T-660 is required.

2.

- Sarnacol® T-660 is also applied to the underside of the Sarnafil® T membranes.
- No adhesive must be applied within the welding area.
- Residual adhesive must be removed with Solvent T 660 and the clean surface then treated with Sarnafil® T Prep.

3.

- Let Sarnacol® T-660 adhesive evaporate for about 30 minutes. The evaporation time on the membrane must be observed.
- At higher ambient temperatures a shorter evaporation time is possible.

4.

- After the solvent has evaporated place Sarnafil® T roof wateproofing membrane onto the coated substrate layer and press down firmly, using a pressure roller.

Sarnacol® T-660 APPLICATION

5.

- By heating the Sarnafil® T roof waterproofing membranes the adhesive can be re-activated so that a fully adhered bond with no air pockets is achieved even in corner and perimeter areas.

Caution:
No open flame on adhesive. When heating the membrane avoid glazing the surface, particularly in the welding area.

Sarnacol® T-660

DESCRIPTION
Butyl rubber based one-pack contact adhesive.

USES
Sarnacol® T-660 is a contact adhesive to bond Sarnafil® T roof waterproofing membranes in perimeter and flashing areas.

Sarnafil® AT FSA P APPLICATION

Perimeter are formed using strips of Sarnafil® AT FSA P roof waterproofing membranes.
The flashing strips are to be fully self-adhered to the substrate and welded to the field sheet. The substrate must be free of ridges, and the flashing must be attached with a good adhesive bond.

1. Unrolling of Sarnafil® AT FSA P and peel off 1/3 of the release liner from the top.

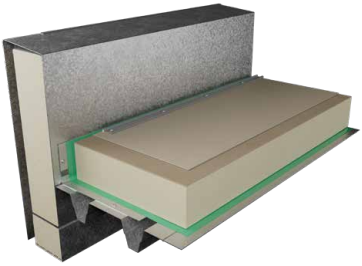
2. Attach Sarnafil® AT FSA P to upstand and roll it tight to the substrate.

3. Tear off the remaining 2/3 of the release liner.

4. Roll it tight to the substrate.

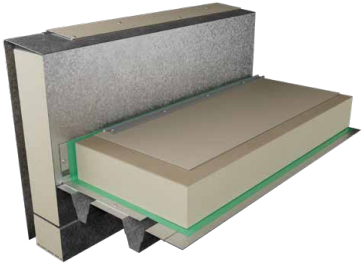
5. Final Sarnafil® AT FSA P shall have > 10 mm of 'non self adhesive' gap to roofing waterproofing membranes.

PARAPET



1.

- Proper cleaning of parapet surface.
- Installation of SikaRoof® Sealing Tape 10/10 along parapet edge.

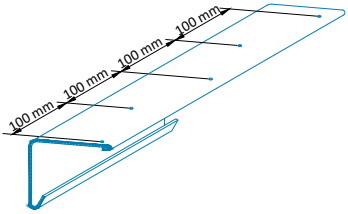


2.

- Installation of bended Sarnafil® T Metal Sheet/coil according to below fastening sequency.

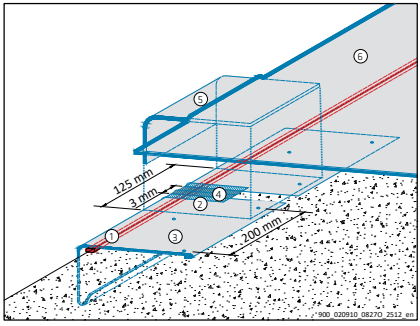
3.

- Sarnafil® T Metal Sheet/coil, mechanically fastened – row distance 40 mm.



4.

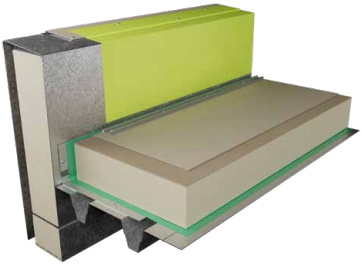
- Longitudinal joint Sarnafil® T Metal Sheet/coil.



1 SikaRoof® Sealing Tape 10/10
2 Connection plate
3 Sarnafil® T Metal Sheet/coil
4 Tape to avoid full weld
5 Sarnafil® T / Sarnafil® AT – 125 mm strip
6 Sarnafil® T / Sarnafil® AT membrane

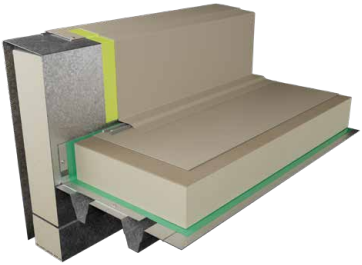
PARAPET

USING Sarnafil ® T MEMBRANE WITH Sarnacol ® T-660 ADHESIVE



5.

- Apply Sarnacol®T-660 adhesive to the parapet surface.
- Apply Sarnacol®T-660 adhesive to to the cutted Sarnafil® T roof waterproofing membrane.



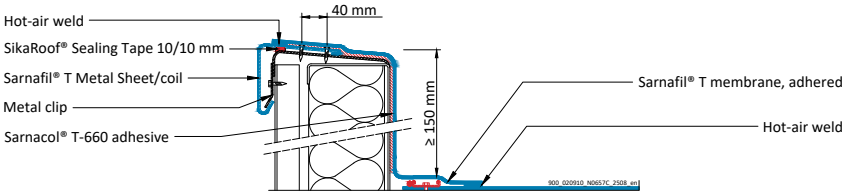
6.

- Once the adhesive has been allowed to evaporate sufficiently (finger test after approximately 30 minutes).
- Position the roof waterproofing membrane, straighten it, bond it and press it down well with a roller.
- Hot-air welding of Sarnafil® T roof waterproofing membrane to the main roof waterproofing membrane and bended Sarnafil® T Metal Sheet/coil.

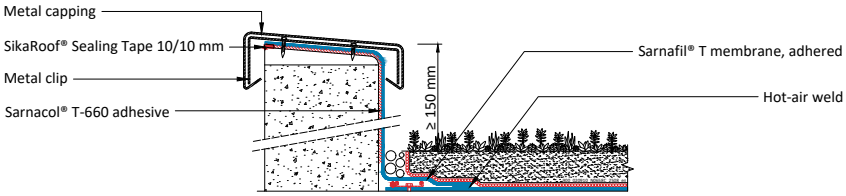
PARAPET

USING Sarnafil ® T MEMBRANE WITH Sarnacol® T-660 ADHESIVE

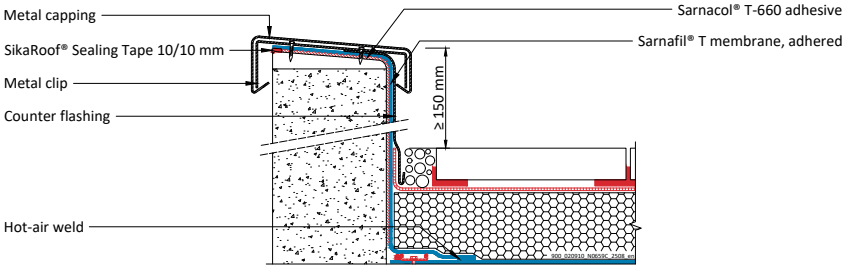
Parapet detailing with Sarnafil® T Metal Sheet/coil



Parapet detailing with metal capping

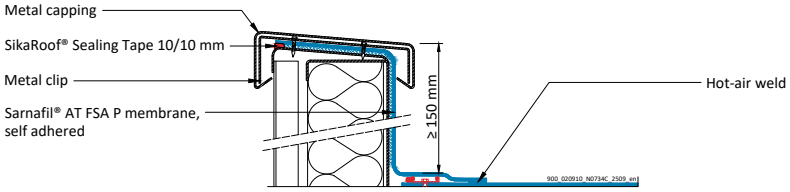


Parapet detailing with metal capping and counter flashing (full protected)



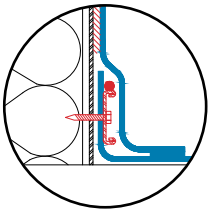
USING Sarnafil ® AT FSA P, FELT SELF ADHERED PARAPET MEMBRANE

Parapet detailing with metal capping

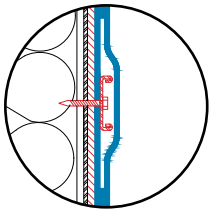


PARAPET

Perimeter securement, vertical installation

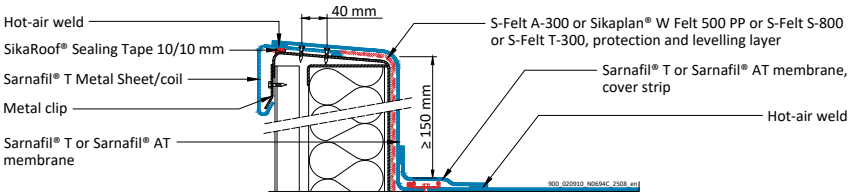


Additional fastening for parapets ≥ 800 mm height

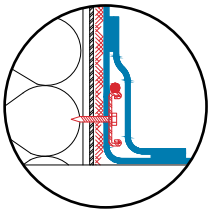


USING MECHANICALLY FASTENED MEMBRANE

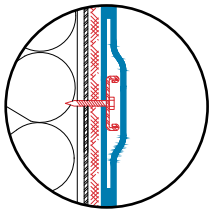
A levelling- and protection layer must be installed between Sarnafil® T / Sarnafil® AT membranes on rough or uneven substrates. Screw the Sarnabar® perimeter securement over the Sarnafil® T / Sarnafil® AT membranes at the base of the parapet, either to the vertical or horizontal surface. The number of fasteners per linear meter depend on the substrate.



Perimeter securement, vertical installation



Additional fastening for parapets ≥ 800 mm height



ROOF EDGE TERMINATION WITH GUTTER

1.

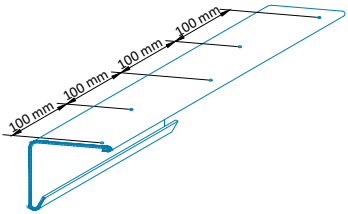
- Proper cleaning of roof edge termination surface.
- Installation of SikaRoof® Sealing Tape 10/10 along roof egde termination.

2.

- Installation of bended Sarnafil® T Metal Sheet/coil according to below fastening sequency.

3.

- Sarnafil® T Metal Sheet/coil, mechanically fastened – row distance 40 mm.

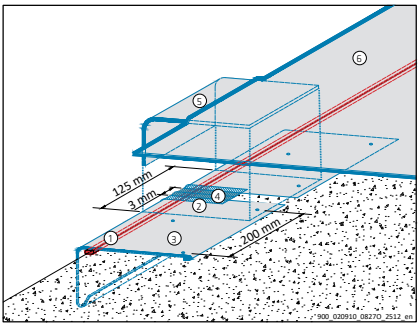


5.

- Hot-air welding of Sarnafil® T / Sarnafil® AT roof waterproofing membranes to the bended Sarnafil®T Metal Sheet/coil.

4.

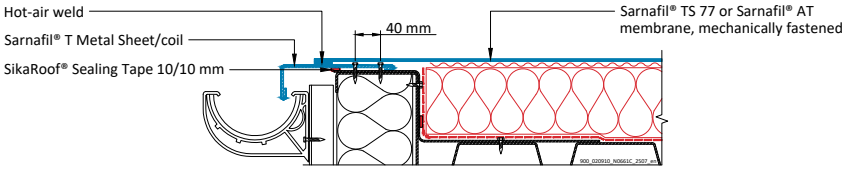
- Longitudinal joint Sarnafil® T Metal Sheet/coil.



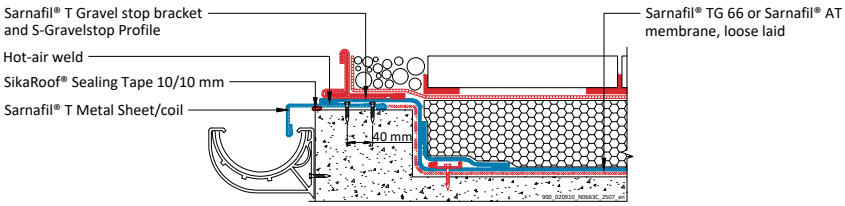
1 SikaRoof® Sealing Tape 10/10
2 Connection plate
3 Sarnafil® T Metal Sheet/coil
4 Tape to avoid full weld
5 Sarnafil® T / Sarnafil® AT – 125 mm strip
6 Sarnafil® T / Sarnafil® AT membrane

ROOF EDGE TERMINATION WITH GUTTER

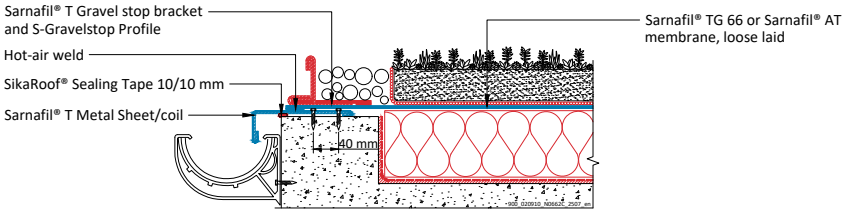
Roof Edge Termination with Gutter detailing for Exposed Roof Systems



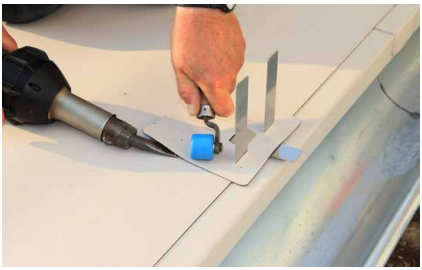
Roof Edge Termination with Gutter detailing for Inverted Roof Systems



Roof Edge Termination with Gutter detailing for Ballasted Roof Systems

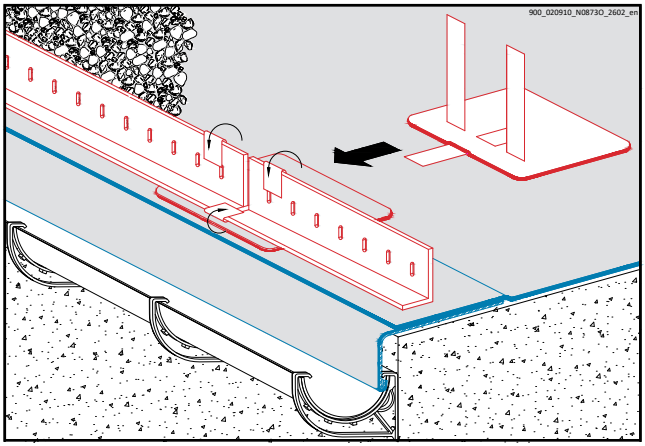


ROOF EDGE TERMINATION WITH GUTTER

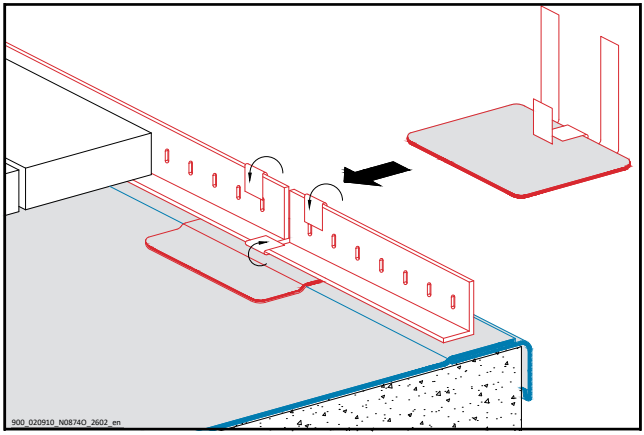


Weld Sarnafil® T Gravel stop bracket with a spacing of approximately 800 mm to the Sarnafil® T / Sarnafil® AT roof waterproofing membranes.

Sarnafil® T GRAVEL STOP BRACKET – OUTSIDE INSTALLATION



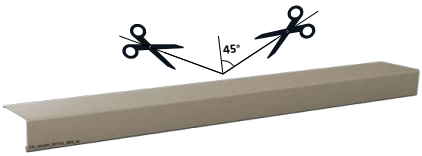
Sarnafil® T GRAVEL STOP BRACKET – INSIDE INSTALLATION



ROOF TRIM FOR PARAPET AND EDGE TERMINATION WITH GUTTER AT INSIDE CORNER

INSIDE CORNER

Cut the bended Sarnafil® T Metal Sheet/coil to fit an inside corner.



1.

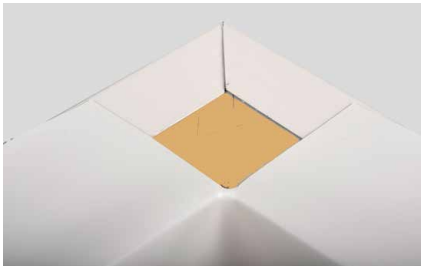
- Mark miter at 45° (twice) on the Sarnafil® T Metal Sheet/coil.

2.

- Cut Sarnafil® T Metal Sheet/coil to size as shown (45°).

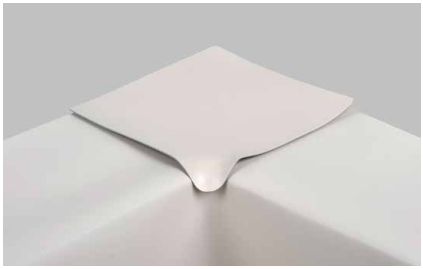
3.

- Bend the Sarnafil® T Metal Sheet/coil to fit to the corner and fix to the substrate.



4.

- Cut a Sarnafil® T / Sarnafil® AT membrane corner patch to fit the inside corner.



5.

- Round the corner of the membrane patch.
- Heat and stretch the inside, rounded corner.

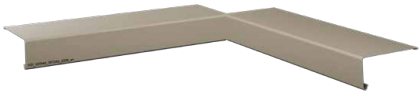
6.

- Hot-air weld the corner patch and round off the outer corner.

ROOF TRIM FOR PARAPET AND EDGE TERMINATION WITH GUTTER AT OUTSIDE CORNER

OUTSIDE CORNER

Cut the bended Sarnafil® T Metal Sheet/coil to fit an outside corner.

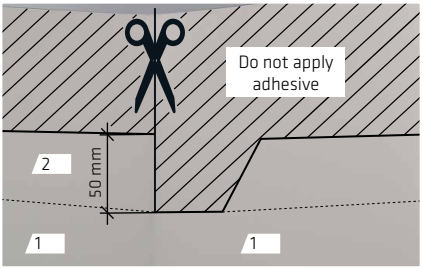


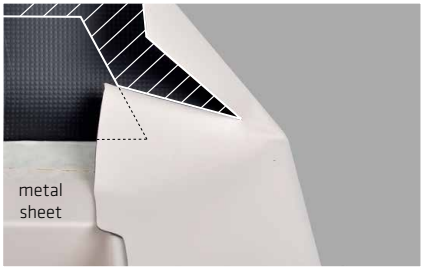
1.

- Mark miter at right angles on the Sarnafil® T Metal Sheet/coil.

2.

- Cut Sarnafil® T Metal Sheet/coil and open.
- Bend the Sarnafil® T Metal Sheet/coil to fit to the corner and fix to the substrate.
- Cover the exposed area of the corner by slipping a piece of metal sheet underneath the metal sheet.





3.

(Roof side view)

- Apply Sarnacol® T-660 to substrate or work with self adhered membrane Sarnafil AT FSA P.
- Apply Sarnacol® T-660 to the Sarnafil® T flashing strip.
- Keep the area shown, free of adhesive or self adhesive to allow welding later.
- Adhere the Sarnafil® T / AT flashing strip to the substrate (vertical roof trim area 1).

4.

- Cut open the corner to a distance of 50 mm above the top of the parapet.
- Adhere the Sarnafil® T / AT flashing strip to the front edge area of the parapet (marked area with 2).
- (View from outside / metal sheet side) Cut the flashing strip to size at the adhered parapet front edge.

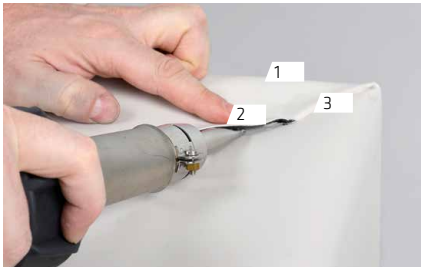
ROOF TRIM FOR PARAPET AND EDGE TERMINATION WITH GUTTER AT OUTSIDE CORNER

5.

- Hot-air weld the flashing strip to the Sarnafil® T Metal Sheet/coil.
- Cut the upstanding Sarnafil® T / Sarnafil ® AT flashing strip in a right angle as illustrated.

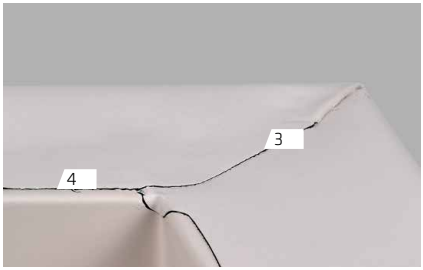
6.

- Form a crease.
- Weld the crease together (membrane pocket).



7.
(View from roof side)

- Fold down the welded crease and adhere the Sarnafil® T / AT flashing strip to the substrate layer (1).
- Cut the flashing strip (2).
- Weld the crease to the flashing strip (3).

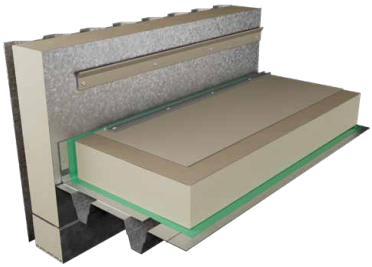


8.
(View from outside / metal sheet side)

- Weld the Sarnafil® T / Sarnafil® AT flashing strip to the metal sheet (4).

UPSTAND

USING Sarnafil ® T MEMBRANE WITH Sarnacol ® T-660 ADHESIVE

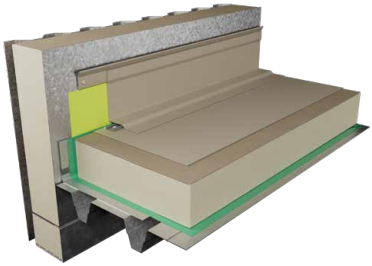


1.

- Proper cleaning of upstand surface.
- Installation of bended Sarnafil® T Metal Sheet/coil, fastening every 200 mm.

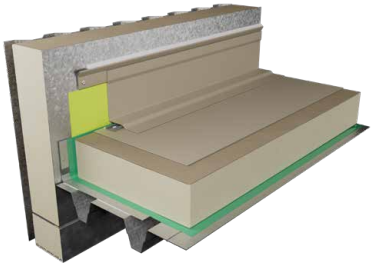
2.

- Apply Sarnacol® T-660 adhesive to the upstand surface.
- Apply Sarnacol® T-660 adhesive to to the cutted Sarnafil® T roof waterproofing membrane.



3.

- Once the adhesive has been allowed to evaporate sufficiently (finger test after approximately 30 minutes).
- Position the roof waterproofing membrane, straighten it, bond it and press it down well with a roller.
- Hot-air welding of Sarnafil® T roof waterproofing membranes to the main roof waterproofing membranes and bended Sarnafil® T Metal Sheet/coil.



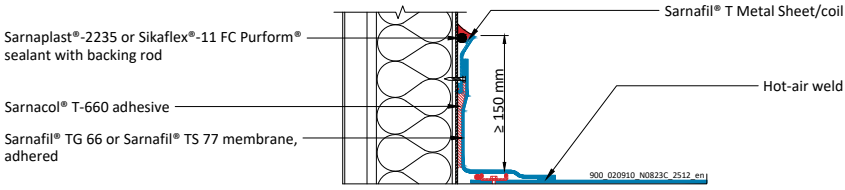
4.

- Installation of Sarnaplast®-2235 or Sikaflex®-11 FC Purform® sealant with backing rod.

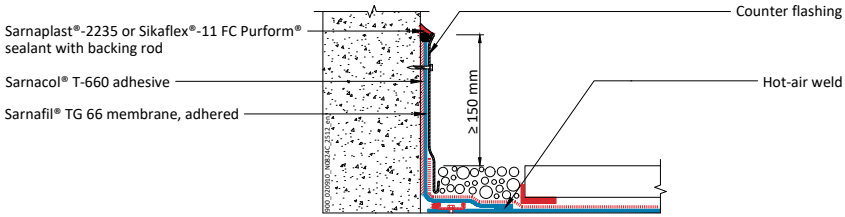
UPSTAND

USING Sarnafil ® T MEMBRANE WITH Sarnacol® T-660 ADHESIVE

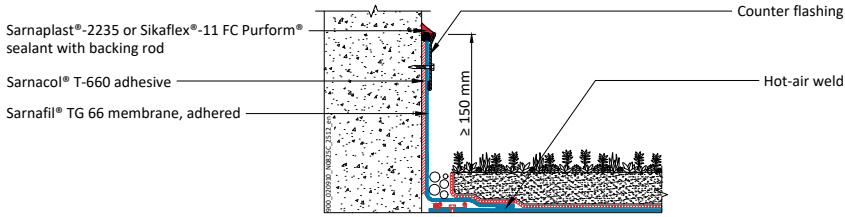
Upstand detailing with Sarnafil® T Metal Sheet/coil



Upstand detailing with counter flashing (full protected)

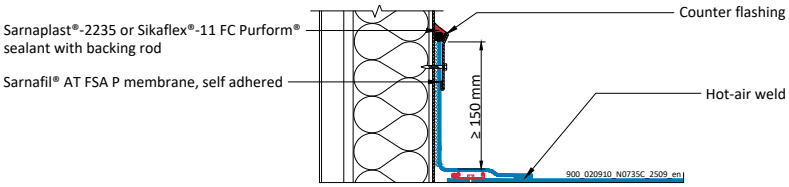


Upstand detailing with counter flashing



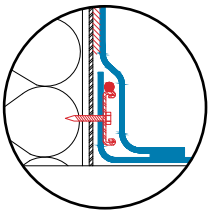
USING Sarnafil ® AT FSA P, FELT SELF ADHERED PARAPET MEMBRANE

Upstand detailing with counter flashing

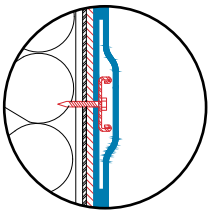


UPSTAND

Perimeter securement, vertical installation



Additional fastening for upstands ≥ 800 mm height

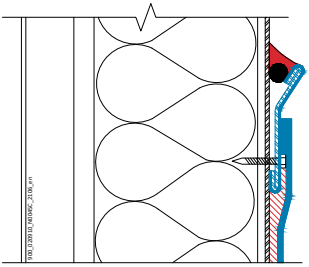


1. To achieve sealant bond on both faces of the joint, it is recommended that a backing rod is installed.

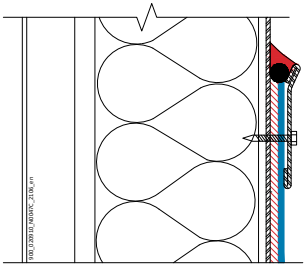
2. Apply Sikalastic® Primer FPO to contact areas (counter flashings, brickwork or plaster etc.). Allow primer to evaporate.

3. Apply Sarnaplast®-2235 or Sikaflex®-11 FC Purform® sealant on top of the backing rod and strike bead to form a concave groove.

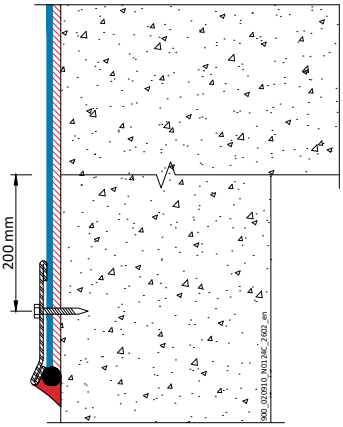
SEALANTS AT FLASHINGS



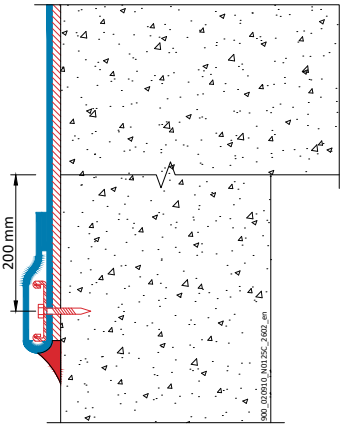
Sarnafil® T Metal Sheet/coil with backing rod.



Counter flashing with backing rod.



Counter flashing with backing rod.
The membrane should be pulled down at least 200 mm below the deck-to-wall joint.



Alternative application with longer roof waterproofing membrane, mechanically fastened with Sarnabar® securement.
The membrane should be pulled down at least 200 mm below the deck-to-wall joint.

OUTSIDE CORNER WITH FLASHING STRIPS HANDMADE

1. Sarnafil® T adhered with Sarnacol® T-660

- Coat the upstand with Sarnacol® T-660 adhesive.
- Apply adhesive Sarnacol® T-660 to the Sarnafil® T flashing strip.
- Allow the adhesive to evaporate (finger test).
- Adhere the flashing strip to the tack-dry adhesive bed.

Sarnafil® AT-18 FSA P self adhered

- Installation according to page 129.

2.

- Cut the membrane overlap in line with the corner. Stop 10 mm short of the corner.

3. Sarnafil® T adhered with Sarnacol® T-660

- Activate the Sarnacol® T-660 adhesive with the hand welder.

4.

- Adhere the flashing strip around the corner without creasing.
- Spot weld the overlap to the Sarnafil® T / Sarnafil® AT roof waterproofing membrane.

OUTSIDE CORNER WITH FLASHING STRIPS HANDMADE

5.

- Finish hot-air weld the overlap to the roof waterproofing membrane.

6.

- Cut a square corner patch of membrane.
- The size should be approximately 50 mm larger than the corner area to cover.
- Round off the patch corner, that is to be positioned at the vertical edge.

7.

- Heat and stretch the rounded corner.

8.

- Spot weld the whole corner patch.

9.

- Cut the corner patch so that it is aligned with the overlap of the Sarnafil® T / Sarnafil® AT flashing strip.

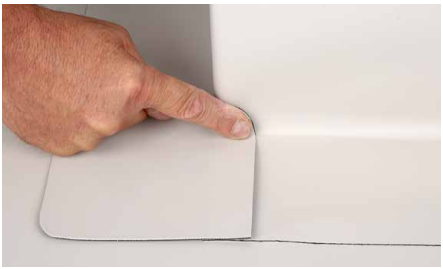
10.

- Round off the protruding corner.
- Hot-air weld the upstanding rounded corner.
- Start at the bottom and weld upwards along the vertically standing corner patch on the lap area.

OUTSIDE CORNER WITH FLASHING STRIPS HANDMADE

11.

- Hot-air weld both sides of the upstanding rounded corner.

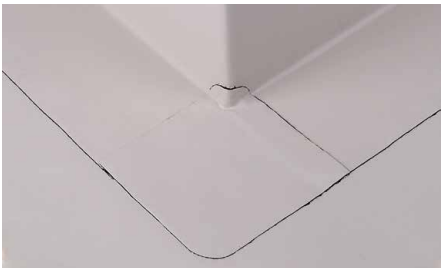


12.

- Press down the welded corner with the fingertip.

13.

- Weld the remaining sides of the patch.



14.

- Completed outside corner.

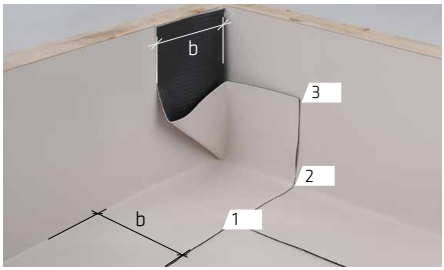
INSIDE CORNER WITH UPRIGHT CREASE HANDMADE

1. Sarnafil® T adhered with Sarnacol® T-660

- Cut the first Sarnafil® flashing strip to fit.
- Coat the upstand with Sarnacol® T-660 adhesive.
- Apply adhesive Sarnacol® T-660 to the flashing strip.
- Allow the adhesive to evaporate (finger test).
- Adhere the flashing strip to the tack-dry adhesive bed.
- Hot-air weld the overlap to the roofing membrane adhesive bed.

Sarnafil® AT-18 FSA P self adhered

- Installation according to page 129



2.

- Cut and adhere the second flashing strip to the upstand so that overlap "b" measures the same on the roof surface as in the corner. An upright crease is thus formed.
- Spot weld the Sarnafil® T / Sarnafil® AT flashing strip in 3 spots (1 – 3).

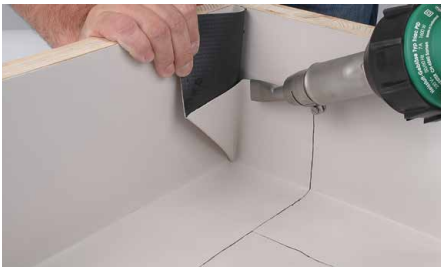
3.

- Weld the crease shut to a closed pocket. Work from the inside towards the front edge.

4.

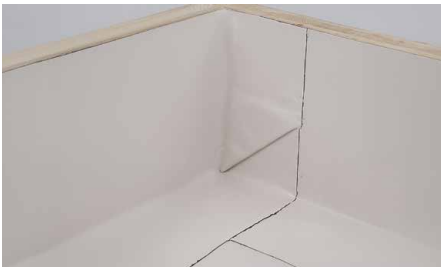
- Weld the second Sarnafil® T / Sarnafil® AT flashing strip to the overlap area.

INSIDE CORNER WITH UPRIGHT CREASE HANDMADE



5.

- Starting from the upright corner area, hot-air weld the closed pocket to the membrane upstand (pre-weld and final weld).



6.

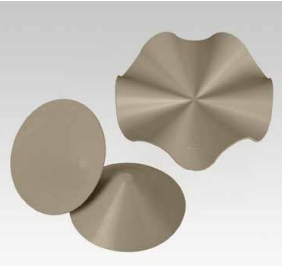
- Completed inside corner.

CORNERS PREFABRICATED

Sarnafil® T Corner 90° I / A

DESCRIPTION
Sarnafil® T Corner 90° I / A is based on flexible polyolefins (FPO) manufactured by injection moulding.

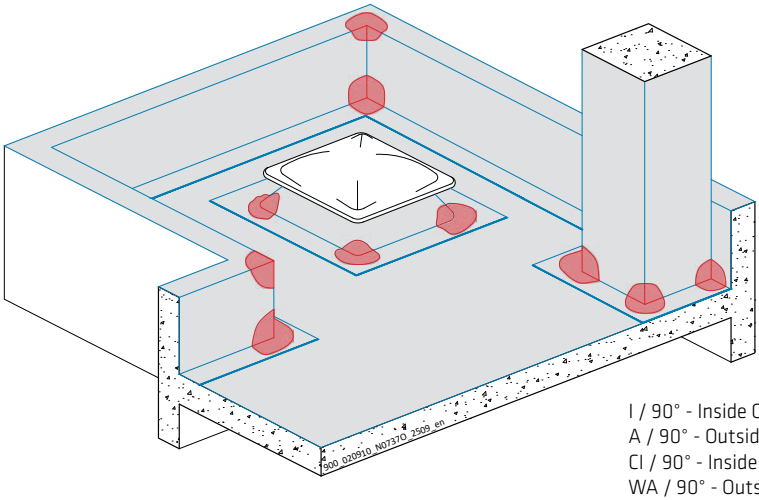
USES
Sarnafil® T Corner 90° I / A. Prefabricated corners for Sarnafil® T / Sarnafil® AT roof waterproofing systems.



Sarnafil® T Preformed Components CI / WA

DESCRIPTION
Sarnafil® T Preformed Components corner are made of homogeneous flexible polyolefins by injection moulding.

USES
Sarnafil® T Preformed Components parts (inner and outer corners) are used in the connection area of the Sarnafil ® T / Sarnafil ® AT roof waterproofing systems.



I / 90° - Inside Corner
A / 90° - Outside Corner
CI / 90° - Inside Corner (Cup)
WA / 90° - Outside Corner (Wave)

CORNERS PREFABRICATED

INSIDE CORNER

1. Cut of the crease shut.

2. Place the Sarnafil® T Corner 90° I in position, spot weld it to the corner and to the vertical surface, and hot-air weld it to the Sarnafil® T / Sarnafil® AT roof waterproofing membranes. Always weld from the corner outwards or upwards, to the right or left. Instead of pressing by hand, you can also use the pressure roller (blue or green) or the pressure roller – 8 mm.

OUTSIDE CORNER

1. Prepare outside corner according to picture.

2. Place the Sarnafil® T Corner 90° A in position, spot weld it to the corner and to the vertical surface, and hot-air weld it to the Sarnafil® T / Sarnafil® AT roof waterproofing membranes. Always weld from the corner outwards or upwards, to the right or left. Instead of pressing by hand, you can also use the pressure roller (blue or green) or the pressure roller – 8 mm.

3. Finalized inside and outside corners along detailing.

SKYLIGHT

USING Sarnafil ® T MEMBRANE WITH Sarnacol ® T-660 ADHESIVE

1.

- Proper cleaning of skylight surface.
- Apply Sarnacol® T-660 adhesive to the skylight surface.
- Apply Sarnacol® T-660 adhesive to to the cutted Sarnafil® T roof waterproofing membrane.

2.

- Once the adhesive has been allowed to evaporate sufficiently (finger test after appproximately 30 minutes).
- Position the roof waterproofing membrane, straighten it, bond it and press it down well with a roller.
- Hot-air welding of Sarnafil® T roof waterproofing to the main roof waterproofing.

3.

- Installation of metal profile.

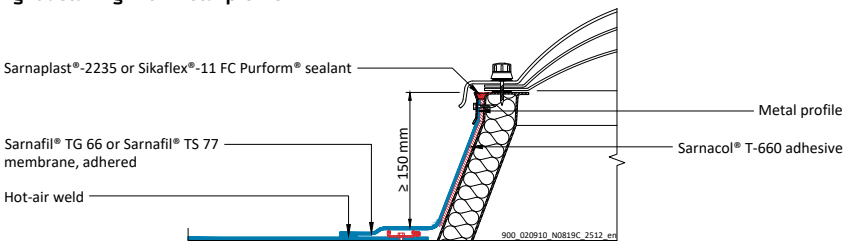
4.

- Installation of Sarnaplast®-2235 or Sikaflex®-11 FC Purform® sealant.

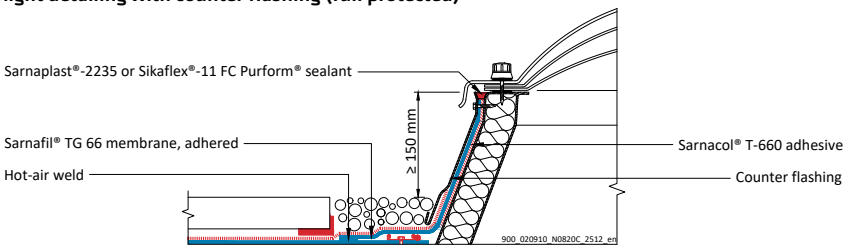
SKYLIGHT

USING Sarnafil ® T MEMBRANE WITH Sarnacol® T-660 ADHESIVE

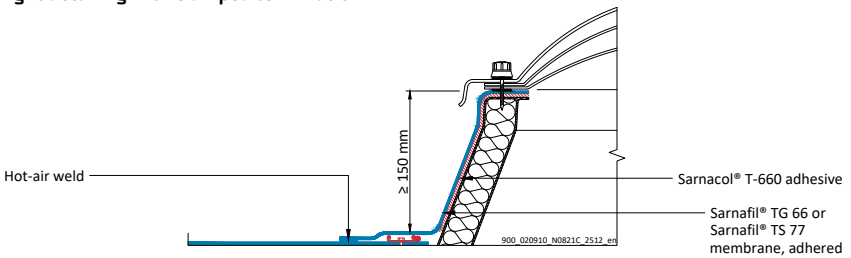
Skylight detailing with metal profile



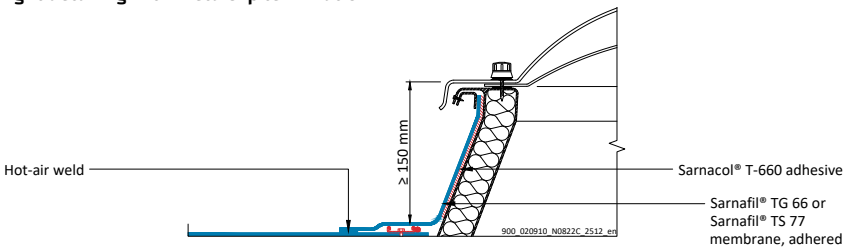
Skylight detailing with counter flashing (full protected)



Skylight detailing with clamped termination



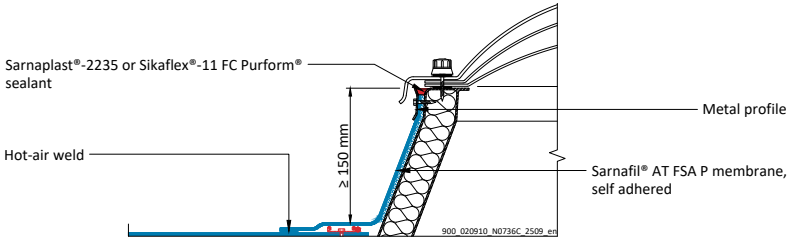
Skylight detailing with metalclip termination



SKYLIGHT

USING Sarnafil ® AT FSA P, FELT SELF ADHERED PARAPET MEMBRANE

Skylight detailing with metal profile



1. Apply Sikalastic® Primer FPO to contact areas and allow primer to evaporate.

2. Apply Sarnaplast®-2235 or Sikaflex®-11 FC Purform® sealant and strike bead to form a concave groove.

Using SikaRoof® MULTITAPE TERMINATION

- Sarnafil® T / Sarnafil® AT roof waterproofing membrane must be pre-applied to the skylight before SikaRoof® Multitape can be applied to the upper end.
- The surface of the substrate must be dry and free of dust and grease.
- Then cut the required SikaRoof® Multitape into separate pieces for each side, including overlap, and, after removing the finger liner, adhere it on without bubbles.
- Overlap at the top edge must be at least 40 mm from the roof waterproofing membrane to the substrate. Recommended width: 100 mm.

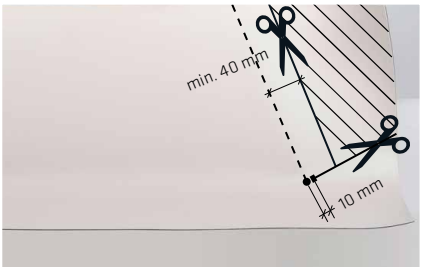
SKYLIGHT

1. Sarnafil® T adhered with Sarnacol® T-660

- Apply Sarnacol® T-660 adhesive around the skylight.
- Apply Sarnacol® T-660 adhesive to two Sarnafil® membrane strips and adhere to the opposing sides of the skylight. Ensure installation without air pockets.

Sarnafil® AT-18 FSA P self adhered

- Installation according to page 129.



2.

- Mark and cut the corners as illustrated.

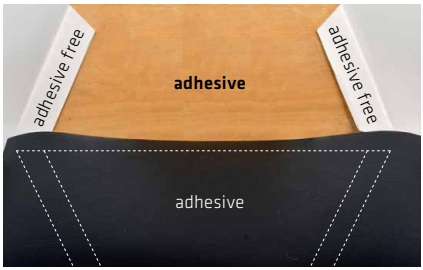
3.

- Warm up the Sarnafil® T / Sarnafil® AT membrane overlap.

4.

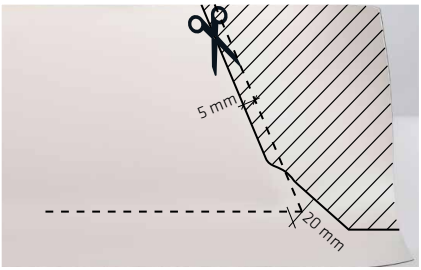
- Fold the membrane overlap around the skylight edges and adhere.

SKYLIGHT



5.

- Take the remaining two Sarnafil® T / Sarnafil® AT membrane flashing strips and mark the adhesive areas.
- Adhere the two remaining Sarnafil® T / Sarnafil® AT flashing strips without air pockets.

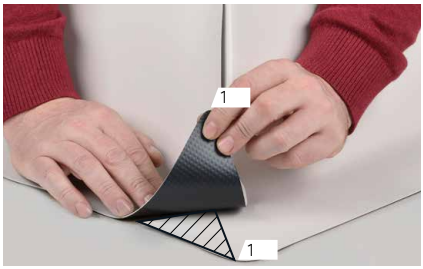


6.

- Cut the Sarnafil® T / Sarnafil® AT membrane strips along the line as illustrated.
- In the lower corner area – leave an additional membrane "thumb tab" of 20 mm for welding.

7.

- Pre-weld and final weld along the vertical seam starting from the "thumb tab".



8.

- Round off the corners of the horizontally projecting the Sarnafil® T / Sarnafil® AT membrane strips (1).
- Cut off excess material as illustrated.

SKYLIGHT

9.

- Pre-weld and final hot-air weld the horizontal seam.

10.

- Hot-air weld the membrane "thumb tab".
- Hot-air weld (gradually) from the inside towards the seam front edge.

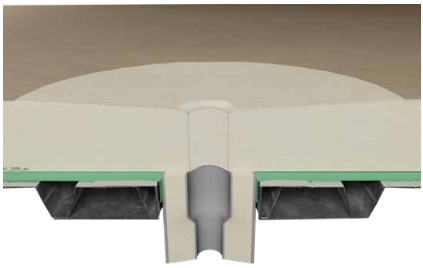
11.

- Press down the warmed up Sarnafil® T / Sarnafil® AT membrane (thumb tab).

12.

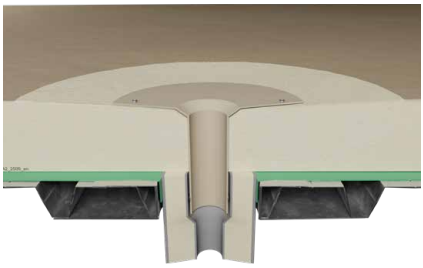
- Hot-air weld the membrane overlap shut at the bottom.

ROOF DRAIN (OUTLET)



1.

- Cut the thermal insulation along drainage down pipe and provide inclination around drainage area.



2.

- Install compression ring on Sarnafil® T Drain and fix into drainage down pipe.
- Secure the drain to the substrate.

3.

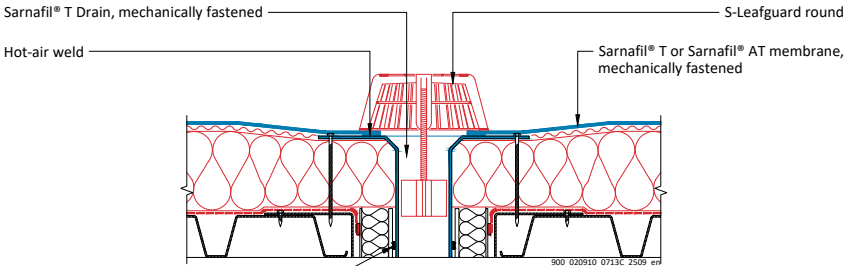
- Cut a hole into the Sarnafil® T / Sarnafil® AT membrane approximately 40 mm larger than the diameter of the drain.
- Hot-air weld the Sarnafil® T / Sarnafil® AT roof waterproofing membrane to the flange of the drain.

4.

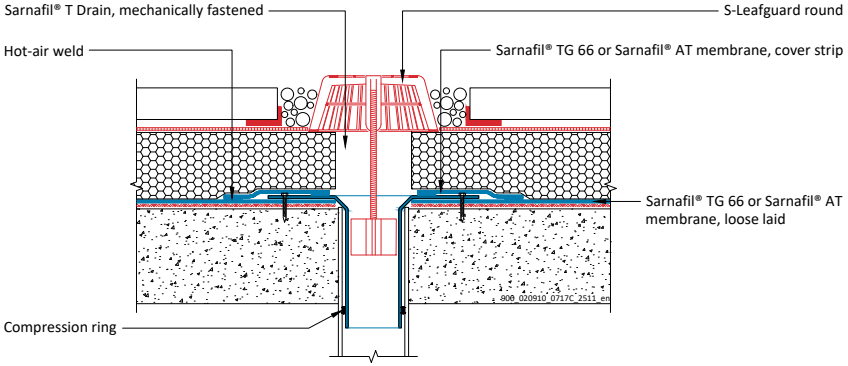
- Install either S-Leafguard round or metal gravel frame depending on the further roof system to be installed on top of Sarnafil® T / Sarnafil® AT roof waterproofing membrane.

ROOF DRAIN (OUTLET)

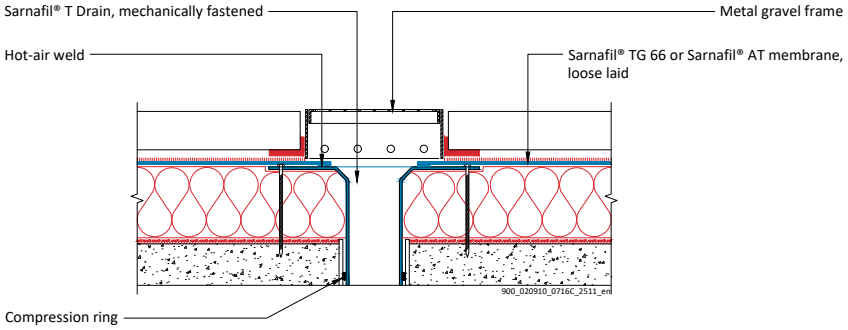
Roof Drain (Outlet) detailing for Mechanically Fastened Roof Systems



Roof Drain (Outlet) detailing with coverstrip for Inverted Roof Systems

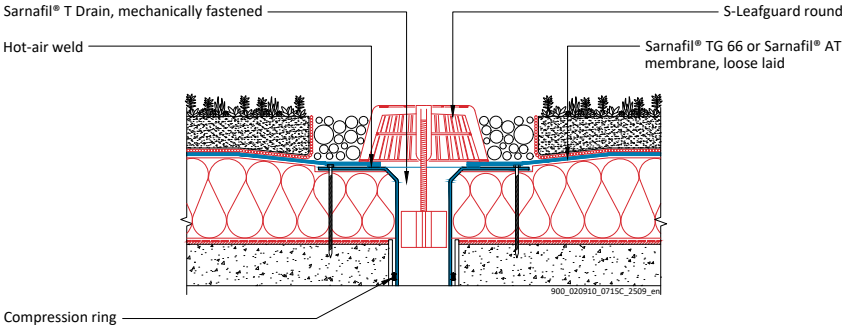


Roof Drain (Outlet) detailing for Utility Roof Systems

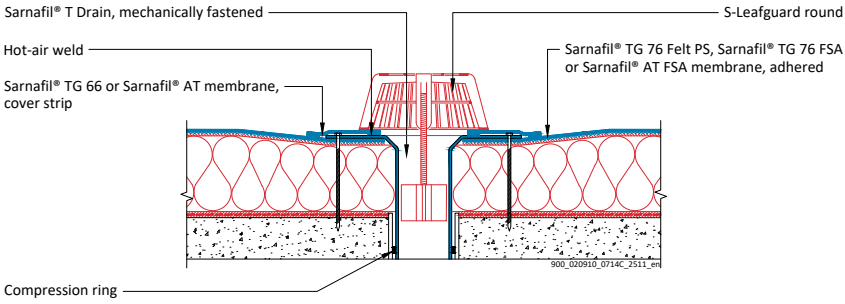


ROOF DRAIN (OUTLET)

Roof Drain (Outlet) detailing for Green Roof Systems



Roof Drain (Outlet) detailing with coverstrip for Adhered Roof Systems



1. Prefabricated Sarnafil® T Drains.

2. Cut the thermal insulation along drainage down pipe.

ROOF DRAIN (OUTLET)

3. Provide inclination around drainage area.

4. Secure Sarnafil® T Drain to the substrate using four fastener.

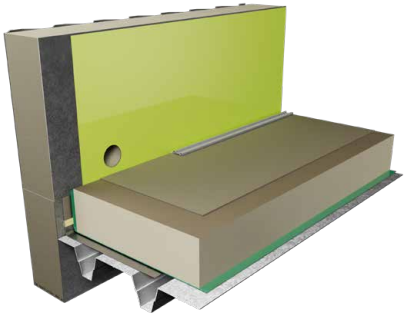
5. Hot-air weld the Sarnafil® T / Sarnafil ® AT roof waterproofing membrane to the flange of the Sarnafil® T Drain at a distance of 20 to 30 mm.

6. Finalized roof drain.

7a. S-Leafguard round to be used in combination with exposed-, gravel ballasted-, inverted and green roof systems.

7b. Metal gravel frame for utility roof systems.

SCUPPER



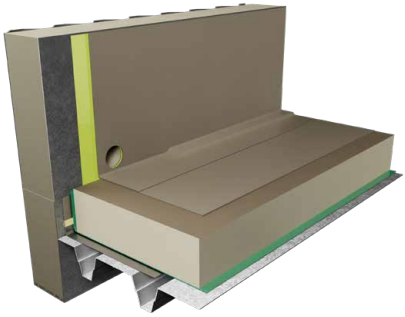
1. Sarnafil® T adhered with Sarnacol® T-660

- Proper cleaning of upstand surface.
- Apply Sarnacol® T-660 adhesive to the upstand surface.
- Apply Sarnacol® T-660 adhesive to the cutted Sarnafil® T roof waterproofing membrane.

Sarnafil® AT-18 FSA P self adhered

- Installation according to page 129.

- Installation of Sarnabar® perimeter securement, except in the area where scupper will be installed.



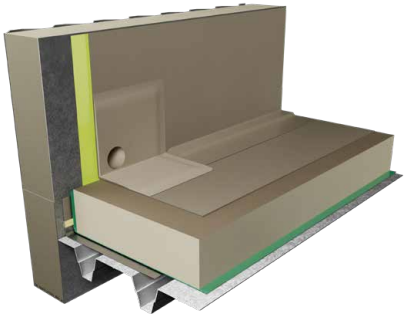
2. Sarnafil® T adhered with Sarnacol® T-660

- Once the adhesive has been allowed to evaporate sufficiently (finger test after approximately 30 minutes).
- Position the Sarnafil® T roof waterproofing membrane, straighten it, bond it and press it down well with a roller.

Sarnafil® AT-18 FSA P self adhered

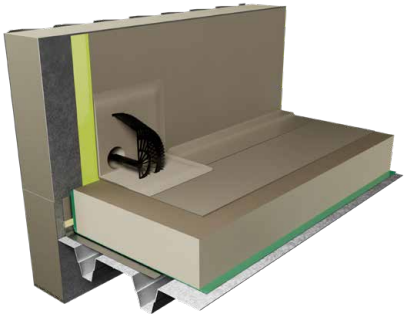
- Installation according to page 129.

- Hot-air welding of Sarnafil® T / Sarnafil® AT-18 FSA P roof waterproofing to the main Sarnafil® T / Sarnafil® AT roof waterproofing.



3.

- Install the Sarnafil® T Scupper with the pre-applied Sarnafil® T / Sarnafil® AT membrane piece into the pre-cutted upstand.
- Secure the prepared Sarnafil® T Scupper to the roof level and upstand.
- Hot-air weld the ovelaps to the Sarnafil® T / Sarnafil® AT roof waterproofing membrane (roof level and upstand).



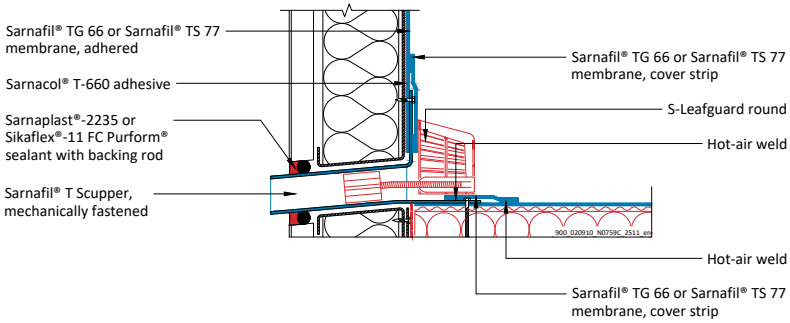
4.

- Install either S-Leafguard round or metal gravel frame depending on the further roof system to be installed on top of Sarnafil® T or Sarnafil® AT roof waterproofing membrane.

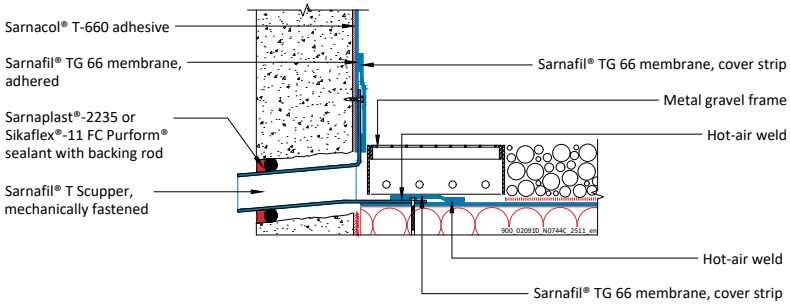
SCUPPER

USING Sarnafil® T WITH Sarnacol® T-660 ADHESIVE

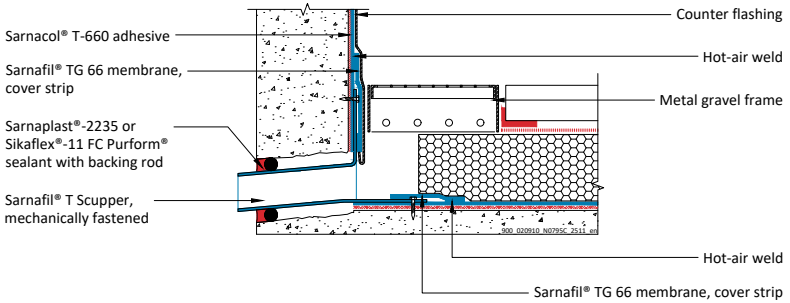
Scupper detailing for Exposed Roof Systems



Scupper detailing for Gravel Ballasted Roof Systems

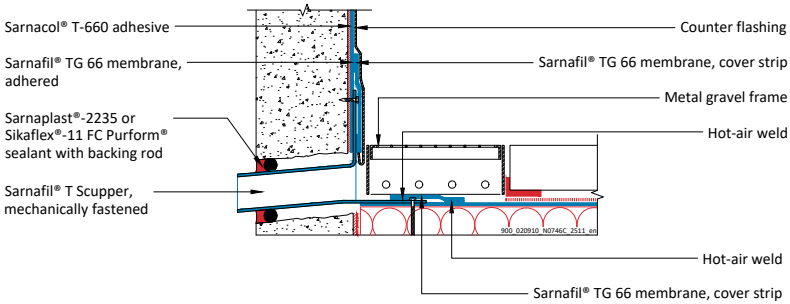


Scupper detailing for Inverted Roof Systems

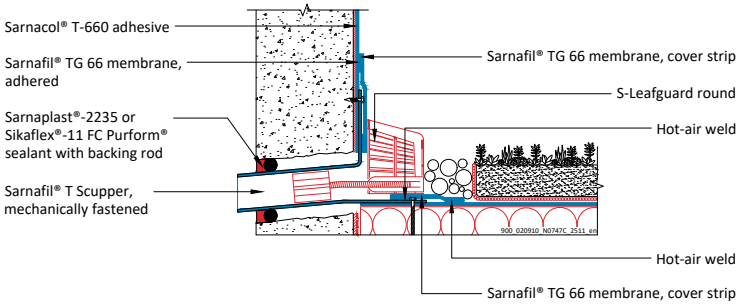


SCUPPER

Scupper detailing for Utility Roof Systems

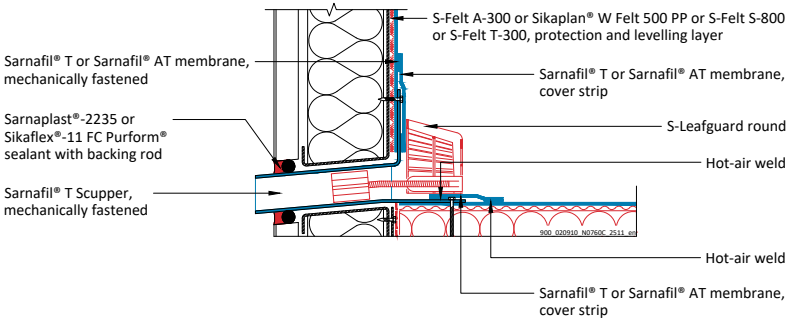


Scupper detailing for Green Roof Systems



USING MECHANICALLY FASTENED MEMBRANE

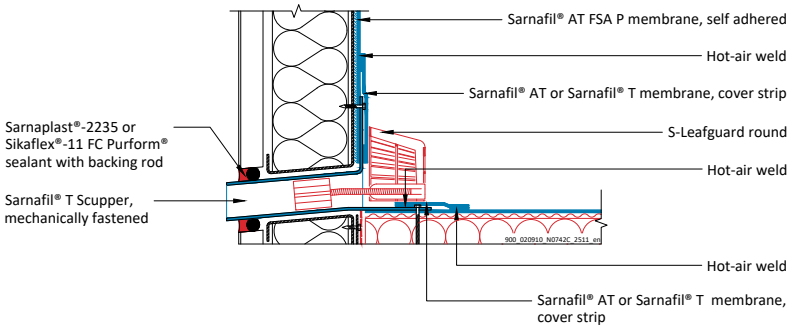
Scupper detailing for Mechanically Fastened Roof Systems



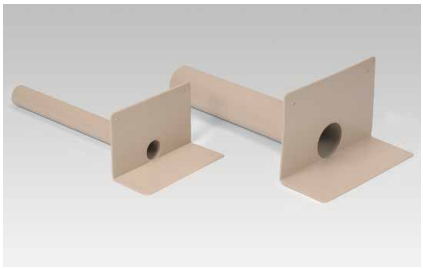
SCUPPER

USING Sarnafil® AT FSA P, FELT SELF ADHERED PARAPET MEMBRANE

Scupper detailing with self adhered membrane



SCUPPER



1.

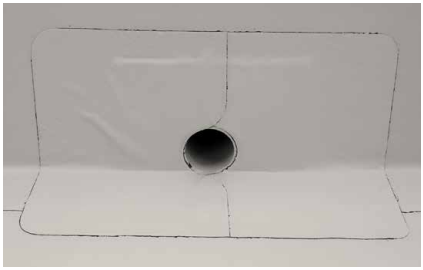
- Prefabricated Sarnafil® T Scuppers.

2.

- Cut two matching Sarnafil® T / Sarnafil® AT membrane pieces as illustrated. Cut larger than Scupper size.
- Hot-air weld the first Sarnafil® T / Sarnafil® AT membrane piece to the Sarnafil® T Scupper.

3.

- Hot-air weld the second Sarnafil® T / Sarnafil® AT membrane piece to Sarnafil® T Scupper.



4.

- Secure the prepared Sarnafil® T Scupper to the roof level and upstand.
- Hot-air weld the overlaps to the Sarnafil® T / Sarnafil® AT roof waterproofing membrane (roof level and upstand).

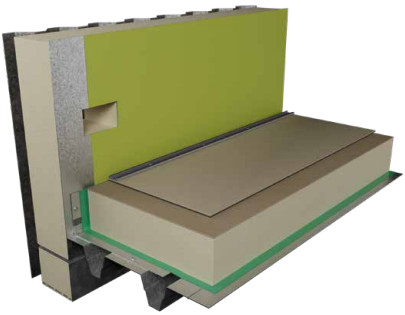
5a.

- S-Leafguard round to be used in combination with exposed and green roof systems.

5b.

- Metal gravel frame for gravel ballasted-, inverted- and utility roof systems.

OVERFLOW



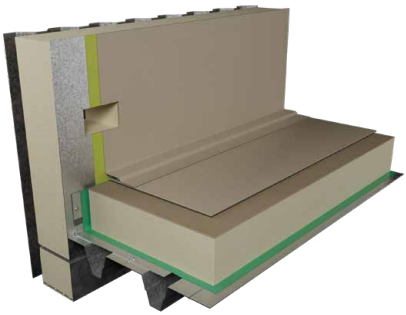
1. Sarnafil® T adhered with Sarnacol® T-660

- Proper cleaning of upstand surface.
- Apply Sarnacol® T-660 adhesive to the upstand surface.
- Apply Sarnacol® T-660 adhesive to the cutted Sarnafil® T roof waterproofing membrane.

Sarnafil® AT-18 FSA P self adhered

- Installation according to page 129.

- Installation of Sarnabar® perimeter securement.



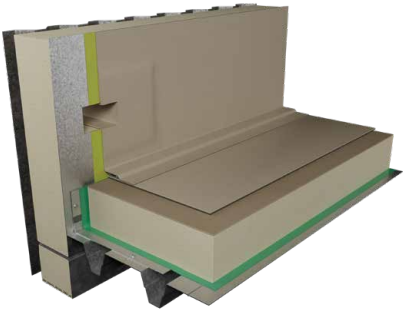
2. Sarnafil® T adhered with Sarnacol® T-660

- Once the adhesive has been allowed to evaporate sufficiently (finger test after approximately 30 minutes).
- Position the Sarnafil® T roof waterproofing membrane, straighten it, bond it and press it down well with a roller.

Sarnafil® AT-18 FSA P self adhered

- Installation according to page 129.

- Hot-air welding of Sarnafil® T / Sarnafil® AT-18 FSA P roof waterproofing to the main Sarnafil® T / Sarnafil® AT roof waterproofing.



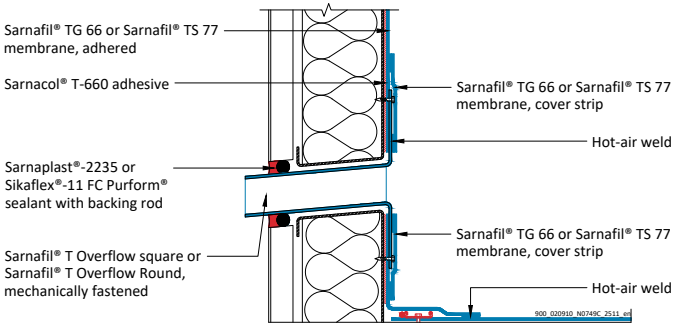
3.

- Install the Sarnafil® T Overflow with the pre-applied Sarnafil® T / Sarnafil® AT membrane piece into the pre-cutted upstand.
- Secure the prepared Sarnafil® T Overflow to the upstand.
- Hot-air weld the ovelaps to the Sarnafil® T / Sarnafil® AT roof waterproofing membrane along the upstand and roof level.

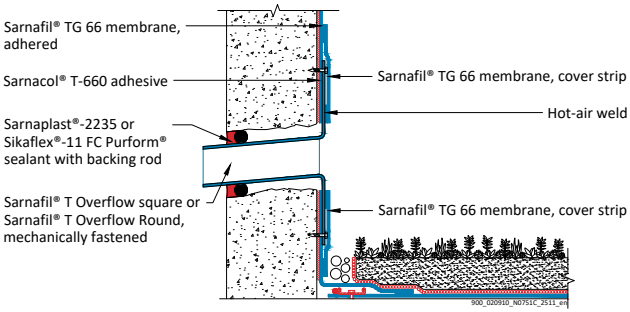
OVERFLOW

USING Sarnafil® T WITH Sarnacol® T-660 ADHESIVE

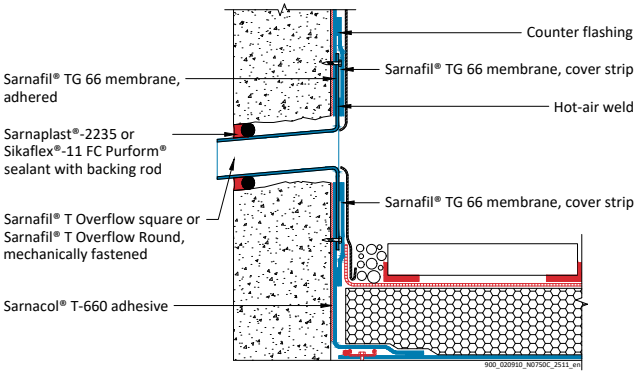
Overflow detailing for Exposed Roof Systems



Overflow detailing for Ballasted Roof Systems



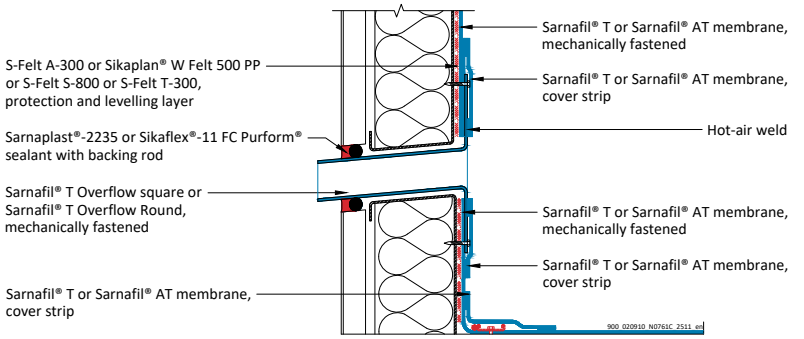
Overflow detailing for Inverted Roof Systems



OVERFLOW

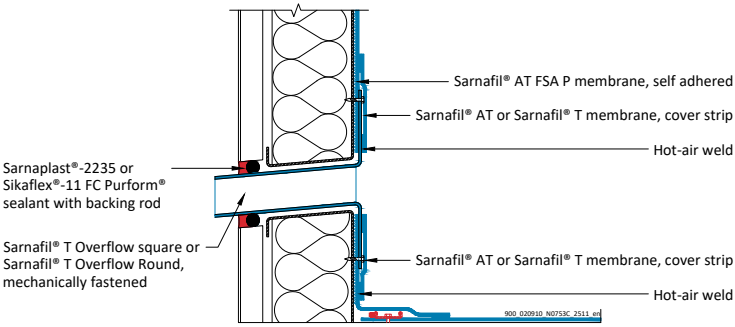
USING MECHANICALLY FASTENED MEMBRANE

Overflow detailing for Mechanically Fastened Roof Systems



USING Sarnafil® AT FSA P, Felt Self Adhered Parapet Membrane

Overflow detailing with self adhered membrane



OVERFLOW

1.

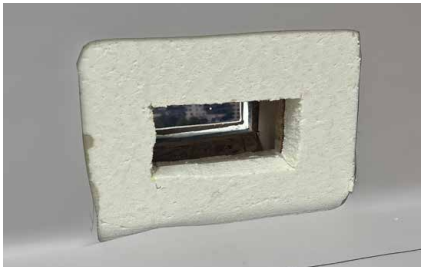
- Prefabricated Sarnafil® T Overflows.

2.

- Cut out the membrane along the overflow opening.

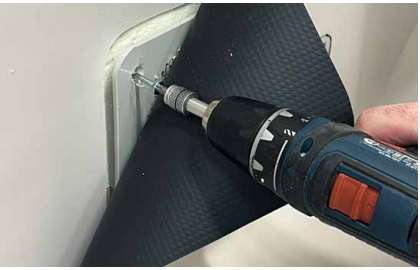
3.

- Install Sarnafil® T Overflow into the pre-cutted hole and mark the base plate to the upstand.



4.

- Cut out the Sarnafil® T / Sarnafil® AT roof waterproofing membrane along the marked lines.



5.

- Secure the prepared Sarnafil® T Overflow to the upstand.

6.

- Hot-air weld the overlaps to the Sarnafil® T / Sarnafil® AT roof waterproofing membrane (roof level and upstand).

VENT PIPE / POST PREFABRICATED

1.

- Vent pipe / post flashing.

2.

- Install Sarnafil® T Post or Sarnafil® T Pipe Flashing and hot-air weld to the Sarnafil® T / Sarnafil® AT roof waterproofing membrane.
- In case of using Sarnafil® T Post Flashing also hot-air weld vertical area of open flashing.

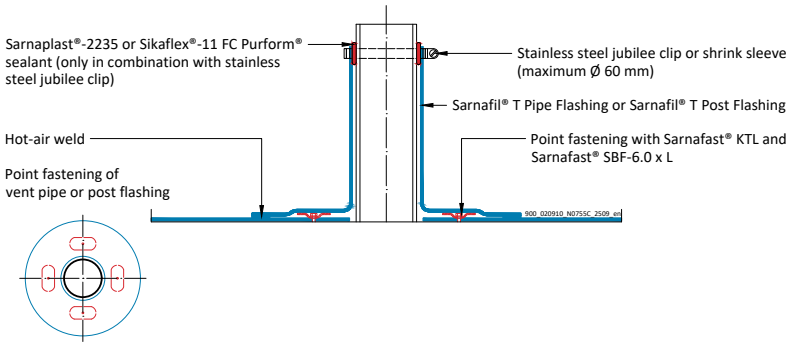
3.

- Sarnaplast®-2235 or Sikaflex®-11 FC Purform® sealant to be installed with stainless steel jubilee clip.
- Prime the sealing area with Sikalastic® Primer FPO and allow primer to evaporate.
- Insert Sarnaplast®-2235 or Sikaflex®-11 FC Purform® between the penetrating pipe / post flashing and the Sarnafil® T Post or Sarnafil® T Pipe Flashing.
- Secure the Sarnafil® T Post or Sarnafil® T Pipe Flashing over the Sarnaplast®-2235 or Sikaflex®-11 FC Purform® with a jubilee clip.

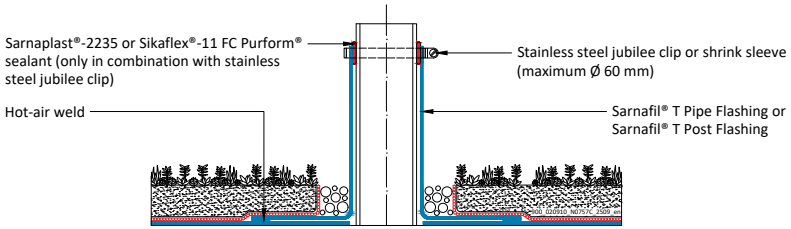
VENT PIPE / POST PREFABRICATED

USING PREFABRICATED POST OR PIPE FLASHINGS IN COMBINATION WITH STAINLESS JUBILEE CLIP OR SHRINKING SLEEVE

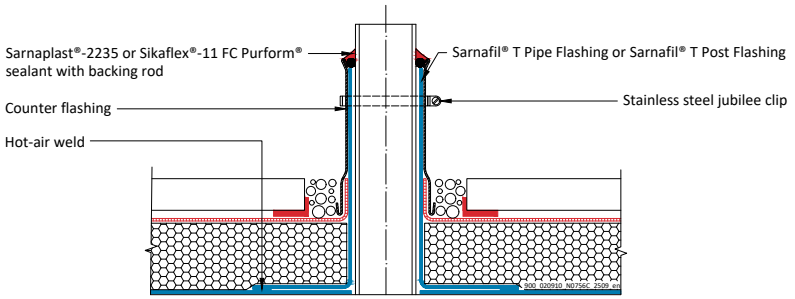
Vent Pipe / Post detailing for Mechanically Fastened Roof Systems



Vent Pipe / Post detailing for Ballasted Roof Systems

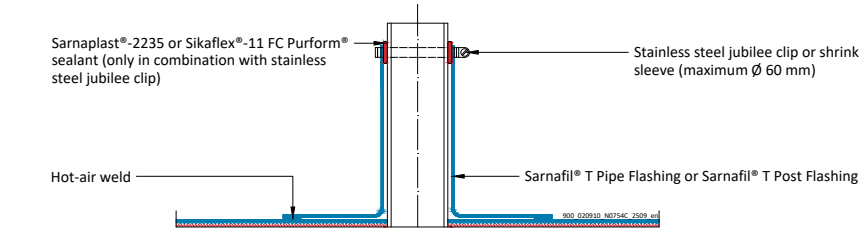


Vent Pipe / Post detailing for Inverted Roof Systems



VENT PIPE / POST PREFABRICATED

Vent Pipe / Post detailing for Adhered Roof Systems



Prefabricated Sarnafil® T Pipe Flashing.

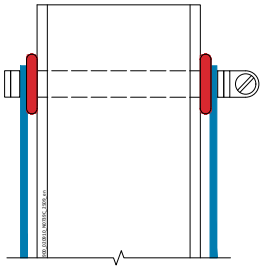
Prefabricated Sarnafil® T Post Flashing.

Prefabricated SikaRoof® Point Flashing.

SikaRoof® Multitape.

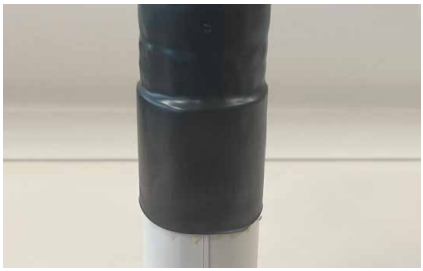
VENT PIPE / POST PREFABRICATED

STAINLESS STEEL JUBILEE CLIP TERMINATION



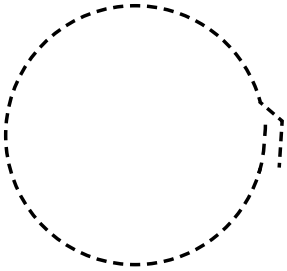
Sarnaplast®-2235 or Sikaflex®-11 FC Purform® sealant to be applied between pipe / post flashing and membrane and fixed with stainless steel jubilee clip.

SHRINKING HOSE TERMINATION



SikaRoof® Point Flashing application with shrinking hose termination.

SikaRoof® MULTITAPE TERMINATION

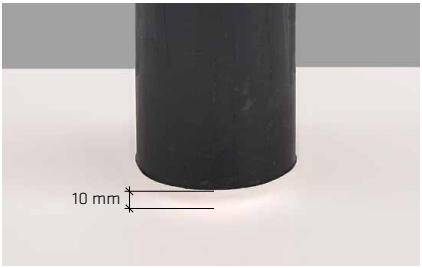


SikaRoof® Multitape application along pipe / post flashing with overlapping (drawing).

VENT PIPE HANDMADE

1.

- Cut a flange from a piece of Sarnafil® T / Sarnafil® AT roof waterproofing membrane.
- Cut a hole into the flange approx. 10 mm smaller than the diameter of the vent pipe.

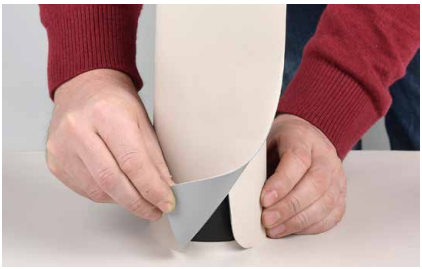


2.

- Slide the flange, without heating, over the vent pipe to create an upstand of 10 mm.

3.

- Cut a piece of Sarnafil® T 66 D membrane as pipe flashing with an overlap of 30 mm.
- Spot weld the overlap of the pipe flashing.



4.

- Round the edges of the pipe flashing overlap.
- Pull the pipe flashing off the vent pipe.

5.

- Evenly warm up the bottom edge of the Sarnafil® T 66 D pipe flashing.

6.

- Stretch by at least 15 mm.

VENT PIPE HANDMADE

7.

- Put the pipe flashing over the pipe and hot-air weld the rounded edges of the overlap area.

8.

- Pre-weld the pipe flashing to the Sarnafil® T / Sarnafil® AT roof waterproofing membrane – while pressing down with a finger.

9.

- Final hot-air weld the pipe flashing to the Sarnafil® T / Sarnafil® AT roof waterproofing membrane using a pressure roller.

10.

- Hot-air weld the vertical seam.
- Cut the Sarnafil® T 66 D pipe flashing level with the top of the vent pipe flashing.
- Hot-air weld the flange to the Sarnafil® T / Sarnafil® AT roof waterproofing membrane (1).

11. Finishing with a plastic cap:

- It is recommended to cover the vent pipe with a plastic cap.

VENT PIPE HANDMADE

11a. Finishing with handmade cap:

- If no plastic cap is available form a handmade vent pipe cap.
- Insert a piece of Sarnafil® T 66 D membrane into the vent pipe with minimum length 50 mm / overlapping approximately 20 mm.
- Spot weld the overlap and cut the edge as illustrated.

11b.

- Pull the whole membrane piece out of the vent pipe.
- Hot-air weld the inside overlap.

11c.

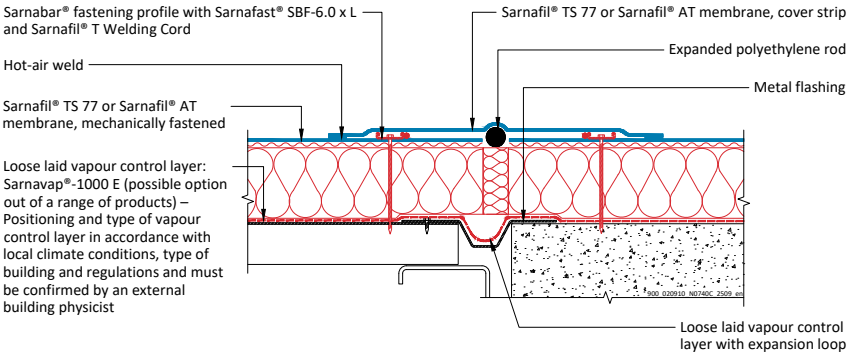
- Inserat the membrane piece into the vent pipe again.
- Make sure that approximately 30 mm protrudes.
- Bend the membrane piece over the vent pipe.

11d.

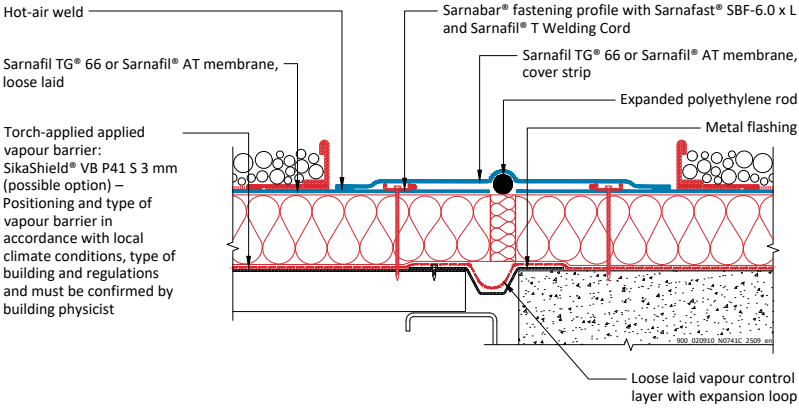
- Spot weld the membrane piece in several places to the vent pipe flashing membrane.

MOVEMENT JOINT

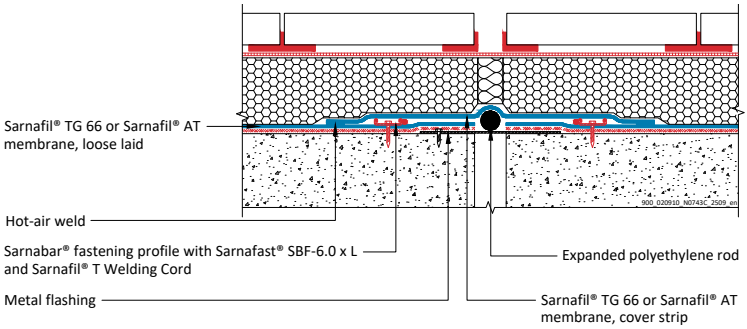
Movement Joint detailing for Mechanically Fastened Roof Systems



Movement Joint detailing for Ballasted Roof Systems

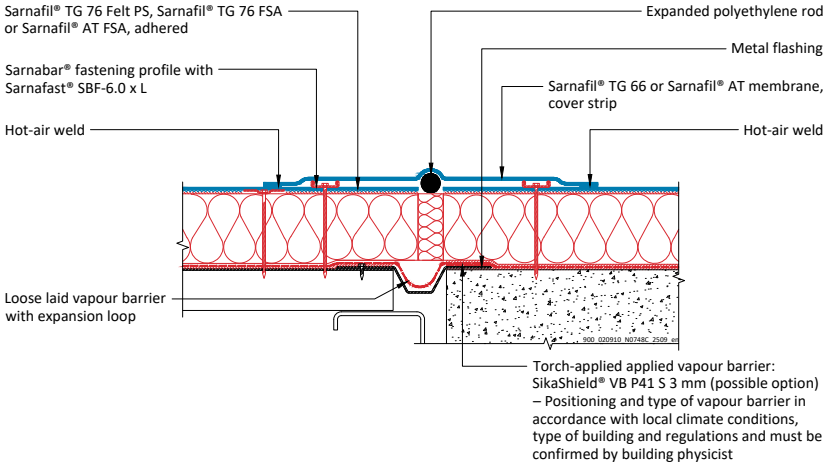


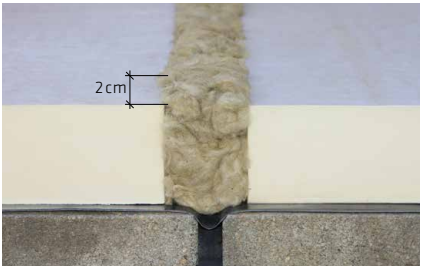
Movement Joint detailing for Inverted Roof Systems



MOVEMENT JOINT

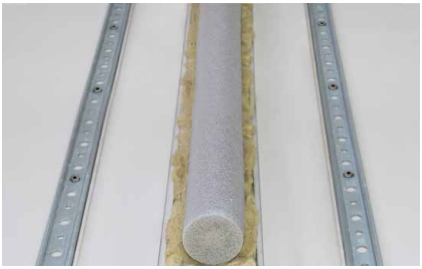
Movement Joint detailing for Mechanically Fastened Roof Systems





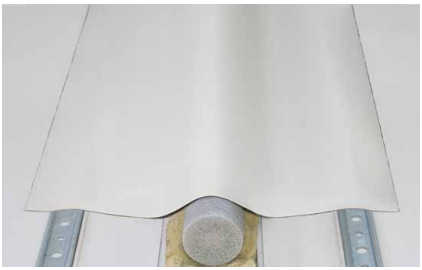
1.

- Installation of vapour- control layer / barrier with expansion loop.
- Installation of soft thermal insulation, around 20 mm higher then main thermal insulation boards.



2.

- Installation of Sarnabar® fastening profiles on both sides of movement joints.
- Installation of expanded polyethylene rod Ø ≥ 60 mm.



3.

- Installation of Sarnafil® T or Sarnafil® AT membrane cover strip and hot-air welding to the Sarnafil® T or Sarnafil® AT roof water-proofing membrane.

MAINTENANCE OF ROOFS

GENERAL INFORMATION

1. Introduction

Sika provides maintenance free roofing membranes, material and accessories, which are unaffected by standing water, accumulations of dirt or normal airborne concentrations of chemicals. The only maintenance required is the usual good husbandry of cleaning rainwater outlets and inspection for evidence of physical damage from outside sources and or exceptional events (e.g. hail, storm). It is strongly recommended that there is an annual inspection of the roof, plus in autumn, if the roofs are near trees, an additional clear-up of leaves and cleaning of the roofs is necessary. It is also advisable to inspect the roof after work is carried out by third parties (trades).

2. Cleaning

If required the membrane may be washed using a domestic detergent solution applied with soft brooms and rinsed well using fresh water. No other treatment is necessary.

Where a ballasted roof has been installed the ballast may accumulate dirt and algae growth. As commercial cleaners or fungicides may contain chemicals detrimental to PVC or FPO their make up should be carefully checked against the Sika chemical compatibility chart before use. If in any doubt, contact Sika Sales Organisation.

3. Removal of Snow

If snow has to be removed from the roof top, it is recommended to keep a few centimeters of snow on the membrane in order to protect the membrane from possible mechanical damages caused by snow removing devices.

4. Chemical Spillage

On a roof where plant is installed chemical spillage is always a possibility. In the event of such an accident the area should be well washed down with a detergent solution and flushed with fresh water until all traces of the chemical have been removed from the membrane surface.

If in any doubt, contact Sika Sales Organisation.

5. Physical Damage

In common with any other roof finish, Sika membranes are liable to physical damage if abused. On Sika however, this damage can be easily located and permanently repaired by Sika approved Contractor / applicator / Applicators. We recommend that the original installing Contractor / applicator / Applicator is used whenever possible to avoid split responsibility for workmanship.

6. Sealants

Occasionally silicone sealing to upstands and, for instance, pipework may need replacing as the joint weathers. Such work must be undertaken by a Sika approved contractor / applicator, removal of all the old sealant and the correct priming of the surfaces prior to the application of the new silicon sealing is essential.

7. Emergency Repair

Obviously it is not always possible to arrange an immediate repair by a Sika approved contractor / applicator. Under normal conditions the following first aid action will provide protection until permanent repairs can be effected.

1. Clean off the area surrounding the damage and dry well.
2. Apply self adhesive tape over the damaged area.

Under no circumstances should repairs be attempted using bitumen-based products.

If in any doubt, contact Sika Sales Organisation.

FURTHER ROOFING PUBLICATIONS ALSO AVAILABLE FROM SIKA

WE ARE SIKA

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, flooring as well as roofing and waterproofing systems.

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