



METHOD STATEMENT

Sika Sarnafil® AT self-healing roofing system

MARCH 2023 / V1 / SIKA SERVICES AG / RETO GRAENICHER

1	SCOPE	4
2	INTRODUCTION	4
2.1	SARNAFIL® AT FSH (FSH = FELT SELF-HEALING)	4
2.1.1	SYSTEM DESCRIPTION	4
2.1.2	BUILD-UP OF THE MEMBRANE	5
2.2	SARNAFIL® AT FSH SA (FSH SA = FELT SELF-HEALING SELF-ADHERED)	5
2.2.1	SYSTEM DESCRIPTION	5
2.2.2	BUILD-UP OF THE MEMBRANE	6
3	GENERAL CONDITIONS	6
3.1	DESCRIPTION	6
3.2	QUALITY ASSURANCE	6
3.3	PROFESSIONALS, CODE REQUIREMENTS	6
3.4	PRODUCT DELIVERY, STORAGE AND HANDLING	6
3.5	JOB CONDITIONS	6
4	MECHANICALLY FASTENED ROOFING SYSTEM	7
4.1	GENERAL	7
4.2	MEMBRANES	7
4.3	PERIMETER SECUREMENT	7
4.4	APPLICABLE INSULATION BOARDS	7
4.5	EXECUTION / APPLICATION	8
4.5.1	SUBSTRATE PREPARATION	8
4.5.2	SUBSTRATE INSPECTION / CONDITION	9
4.5.3	INSULATION INSTALLATION	10
4.5.4	INSTALLATION OF SIKA SARNAFIL® ROOFING MEMBRANE	10
4.5.5	MECHANICALLY FASTENED ROOFINGS SYSTEM - ROOFING AREA	11
5	BALLASTED ROOFING SYSTEM	12
5.1	GENERAL	12
5.2	MEMBRANES	12
5.3	PERIMETER SECUREMENT	12
5.4	EXECUTION / APPLICATION	12
5.4.1	SUBSTRATE PREPARATION	12

5.4.2	SUBSTRATE INSPECTION / CONDITION	13
5.4.3	INSTALLATION OF SIKA SARNAFIL® ROOFING MEMBRANE	13
5.4.4	BALLASTED ROOFINGS SYSTEM - ROOFING AREA	14
6	ADHERED ROOFING SYSTEM	14
6.1	GENERAL	14
6.2	MEMBRANES	14
6.3	PEEL STOP	15
6.4	APPLICABLE INSULATION BOARDS	15
6.5	APPLICABLE PRIMERS	16
6.6	EXECUTION / APPLICATION	16
6.6.1	SUBSTRATE PREPARATION	16
6.6.2	SUBSTRATE INSPECTION / CONDITION	18
6.6.3	INSULATION INSTALLATION	18
6.6.4	INSTALLATION OF SIKA SARNAFIL® ROOFING MEMBRANE	19
6.6.5	APPLICATION OF SARNAFIL® AT FSH SA	19
7	T-, CROSS AND BUTT JOINTS	21
8	INSTALLING PARAPET USING SARNAFIL® AT FSA P	22

Information contained herein and any other advice 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. The information only applies to the application(s) and product(s) expressly referred to herein. In case of changes in the parameters of the application, such as changes in substrates etc., or in case of a different application, consult Sika's Technical Service prior to using Sika products. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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

1 SCOPE

This Method Statement describes the components, build-ups and installation of a Sarnafil® AT felt backed self-healing (Sarnafil® AT FSH) – and Sarnafil® AT felt backed self-healing, self-adhered (Sarnafil® AT FSH SA) polymeric roofing membrane waterproofing system.

2 INTRODUCTION

There are two versions of Sika Sarnafil® AT self-healing polymeric roofing membrane waterproofing membranes available:



2.1 SARNAFIL® AT FSH (FSH = FELT SELF-HEALING)

Sarnafil® AT FSH is a self-healing, multi-layer synthetic roof waterproofing sheet. It is based on elastomer modified flexible polyolefin (FPO) with internal Polyester reinforcement and glass non-woven inlay and a Polyester backing according to EN 13956. The embedded reinforcement provides resistance to wind uplift, the glass fleece inlay optimizes dimensional stability.

Sarnafil® AT FSH is a hot air weldable roof membrane formulated for direct exposure and designed for use in all global climatic conditions.

Application:

- a) mechanically fastened roofing systems
- b) ballasted roofing systems

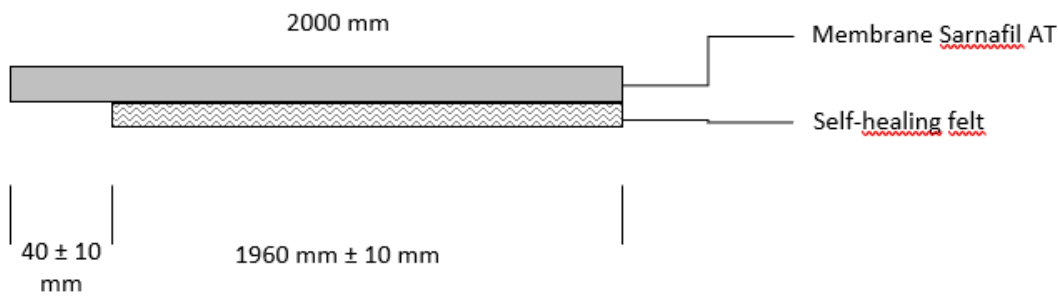
	
Rolls are wrapped individually in a blue PE-Foil.	Shows the welding edge, self-healing felt backing

2.1.1 SYSTEM DESCRIPTION

- a) Mechanically fastened roofing systems: Sarnafil® AT FSH roof membrane is applied directly to the pre-secured insulation boards or directly over the substrate. The insulation boards shall be mechanically secured to the roof deck. The membrane shall be mechanically fastened in the overlap to resist against wind uplift.
- b) Ballasted roofing systems: Sarnafil® AT FSH roof membrane is applied directly over the substrate.

The waterproofing function remains unchanged after damaging the polymeric membrane thanks to swelling of the self-healing felt backing.

2.1.2 BUILD-UP OF THE MEMBRANE



2.2 SARNAFIL® AT FSH SA (FSH SA = FELT SELF-HEALING SELF-ADHERED)

Sarnafil® AT FSH SA (thickness 1,8 mm) is a self-healing, self-adhesive, multi-layer synthetic roof waterproofing sheet. It is based on elastomer modified flexible polyolefin (FPO) with internal glass fiber scrim reinforcement and glass non-woven inlay and a Polyester backing with self-adhesive film and liner according to EN 13956. The glass fleece inlay optimizes dimensional stability and factory applied self-adhesive film provides prompt surface adhesion.

Sarnafil® AT FSH SA is a hot air weldable roof membrane formulated for direct exposure and designed for use in all global climatic conditions.

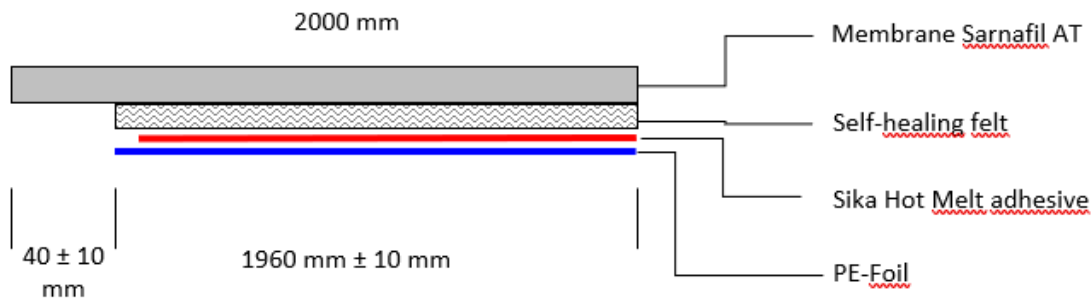
<p>Rolls are wrapped individually in a blue PE-Foil.</p>	<p>Shows the welding edge, adhesive coated self-healing felt backing incl. release liner</p>

2.2.1 SYSTEM DESCRIPTION

Sarnafil® AT FSH SA roof membrane is adhered directly to the pre-secured insulation board. The insulation boards are secured to the roof deck by either mechanical fastened or adhered to the substrate. As an alternative Sarnafil® AT FSH SA roof membrane can be directly applied to the roofing substrate.

The waterproofing function remains unchanged after damaging the polymeric membrane thanks to swelling of the self-healing felt backing. The self-adhered back layer allows a VOC and odour free application during the entire application and remains stable under wind uplift.

2.2.2 BUILD-UP OF THE MEMBRANE



3 GENERAL CONDITIONS

3.1 DESCRIPTION

To install a complete Sika Sarnafil® AT self-healing roofing system including membrane, parapet and other components.

The work includes but is not limited to the installation of:

- Removal of existing roofing membrane and Insulation
- Substrate preparation
- Roof drains
- Vapour control layers
- Insulations
- Roof membrane
- Perimeter fixation / peel-stop
- Fasteners
- Roof membrane parapet
- Primers, cleaners & sealants

3.2 QUALITY ASSURANCE

Refer to Product Datasheet.

3.3 PROFESSIONALS, CODE REQUIREMENTS

Refer to Product Datasheet.

3.4 PRODUCT DELIVERY, STORAGE AND HANDLING

Refer to Product Datasheet.

3.5 JOB CONDITIONS

- Apply only as much of the new roofing membrane as can be made weathertight each day, including all flashing and detail work. All seams shall be hot air welded before leaving the job site that day. Finish the working-day with overnight-seals, overnight-seals to protect the flat roof system against water penetration.

- The substrate must be uniform, firm, solvent resistant, smooth and free of any sharp protrusion or burrs, clean, dry, free of grease, bitumen, oil, dust and loose surface sand / gravel dressing.
- All new roofing waste material (i.e., scrap roof membrane, release liner, empty cans of adhesive) shall be immediately removed from the site by the Applicator and to be disposed of in strict accordance with applicable local requirements.
- The Applicator shall take precautions that storage and application of materials and equipment does not overload the roof deck or building structure.
- Flammable adhesives and primers shall not be stored and should not be used in the vicinity of open flames, sparks and excessive heat.
- The Applicator shall verify that all roof drain lines are functioning correctly (not clogged or blocked) before starting work. Applicator shall report any such blockages in writing to the Owner's Representative for corrective action prior to the installation.
- Applicator shall immediately stop work if any unusual or concealed condition is discovered and shall immediately notify Owner of such condition in writing for correction at the Owner's expense.
- The Applicator shall conduct fastener pull-out tests to verify condition of the deck/substrate and to confirm expected pull-out values.
- Protective wear shall be worn when using primers as required by job conditions.
- Sika membranes are slippery when wet or covered with snow, frost, or ice. Working on surfaces under these conditions may be hazardous. Appropriate safety measures must be implemented prior to working on such surfaces.

4 MECHANICALLY FASTENED ROOFING SYSTEM

4.1 GENERAL

- Sarnafil® AT FSH is fully compatible with all Sika Sarnafil® T accessories.
- Components other than supplied from Sika lies not in the responsibility of Sika.

4.2 MEMBRANES

Refer to Product Datasheet

4.3 PERIMETER SECUREMENT

Perimeter securement shall be installed along the entire roof.

4.4 APPLICABLE INSULATION BOARDS

All suitable insulations boards for mechanically fastened roofing systems.

4.5 EXECUTION / APPLICATION

4.5.1 SUBSTRATE PREPARATION

The roof deck and existing roof construction must be structurally sound to provide support for the new roof system. The Owner's Representative shall ensure that the roof deck is secured to the structural framing according to local building code and in such a manner as to resist all anticipated wind uplifts in that location.

4.5.1.1 NEW CONSTRUCTION

Corrugated/Profiled Steel Deck:

Country specific approved corrugated/profiled steel deck. The steel deck shall confirm a min. quality of Steel S 280 (280 N/m² tensile strength) with a thickness of ≥ 0.7 mm and be installed according to local building code.

Wood Deck:

Country specific approved wood deck. The deck shall conform the requirements for fire performance and rot-resistance. Wood deck shall be installed according to local building code.

Min. Thickness:

- Timber / OSB 3 min. 24 mm
- Plywood min. 22 mm

Structural Concrete Deck & Precast/Pre-stressed Concrete Panel Deck:

The surface shall have a smooth and level finish and shall be free of dust, excess moisture, oil-based curing agents and loose debris. Sharp ridges or other projections above the surface shall be removed before roofing. A minimum concrete quality of C20/25 is required.

4.5.1.2 RE-ROOFING WITH REMOVAL OF EXISTING BITUMEN ROOFING

General Criteria

All existing roofing (bitumen layers, thermal insulation), base flashing, or deteriorated metal flashings shall be removed. Remove only that amount of roofing and flashing which can be made weathertight with new materials during a one-day period or before the onset of inclement weather.

Corrugated/Profiled Steel Deck:

Country approved corrugated/profiled steel deck. All rusted or deteriorated decking shall be defined to determine method of treatment or replacement. Surface-only rusted metal shall be sanded and treated with rust inhibiting paint. Sections that have rusted deeper than the surface or are not structurally sound shall be removed and replaced.

Wood Deck:

Country specific approved wood deck. All rotted or deteriorated wood shall be removed and replaced. Deck attachment shall conform to local code requirements. Fastener heads shall be recessed into the wood surface.

Min. Thickness:

- Timber / OSB 3 min. 24 mm
- Plywood min. 22 mm

Structural Concrete Deck & Precast/Prestressed Concrete Panel Deck:

The roof deck shall be smooth, even, free of dust, dirt, excess moisture or oil and be structurally sound. Sharp ridges, other projections and accumulations of bitumen above the surface shall be removed to ensure a smooth surface before roofing. Any deteriorated decking shall be repaired.

All joints between precast units shall be grouted. Any differentials in height between precast units shall be treated for a smooth transition. Any deteriorated decking shall be repaired.

4.5.1.3 REROOFING WITH REMOVAL OF EXISTING SINGLE-PLY ROOFING

The Owner's Representative and Applicator shall determine the condition of the roof deck and existing insulation. Deteriorated or wet materials are to be removed and replaced. After removal of single-ply membrane inspect insulation boards and reuse only if dry and in stable condition. Add an approved new insulation board. Fasten the new insulation boards in accordance to country specific wind uplift.

4.5.1.4 REROOFING OVER EXISTING SINGLE PLY ROOFING

The Owner's Representative and Applicator shall determine the condition of the roof deck and existing insulation.

On-site test is needed to confirm expected pull-out values.

The required refurbishment has to be defined and coordinated with the Owner and Sika's representative. Deteriorated or wet materials are to be removed and replaced.

Sarnafil® AT FSH membrane can be applied directly on any type of single ply membranes. Surface needs no special cleaning.

4.5.1.5 REROOFING OVER EXISTING BITUMEN ROOFING

The Owner's Representative and Applicator shall determine the condition of the existing roof deck and old roof system. Areas with deteriorated or wet materials are to be removed and replaced.

Sarnafil® AT FSH is allowed to be applied directly on sanded or slated bituminous membranes. In case of additional layer or a thermal insulation board (e.g PUR/PIR or EPS) they need to be fixed mechanically or with SikaRoof® Board Adhesive.

4.5.2 SUBSTRATE INSPECTION / CONDITION

A dry, clean and smooth substrate shall be prepared to receive the Sarnafil® FSH roof membrane.

The Applicator shall inspect the substrate for defects such as excessive surface roughness, contamination, structural inadequacy, or any other condition that will adversely affect the quality of work.

The substrate shall be clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil, grease and bitumen. Roofing shall not start until all defects have been corrected.

All roof surfaces shall be free of water, ice and snow.

Sarnafil® AT FSH shall be applied over compatible and accepted substrates only.

Due to the self-adhesion of the membrane all layers of the roof build-up and substrate must be secured against wind uplift.

4.5.3 INSULATION INSTALLATION

General Criteria:

Insulation shall be installed according to insulation manufacturer's instructions. Install tapered insulation in accordance with insulation manufacturer's shop drawings. Do not install more insulation board than can be covered with Sarnafil® AT FSH membrane by the end of the day or the onset of inclement weather.

4.5.3.1 MECHANICAL ATTACHMENT

According to the country specific wind uplift, the Insulation boards shall be mechanically fastened to the deck with approved fasteners and plates at a rate according to the insulation manufacturer's and/or Sika recommendations for fastening rates and patterns. The quantity and locations of the fasteners and plates shall also cause the insulation boards 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 insulation board shall be installed tightly against the adjacent boards on all sides.

Fasteners are to be installed consistently in accordance with fastener manufacturer' recommendations. Fasteners are to have minimum penetration into structural deck recommended by the fastener manufacturer and/or Sika's recommendations.

Use fastener tools with a depth locator and torque-limiting attachment as recommended or supplied by fastener manufacturer to ensure proper installation.

4.5.3.2 ADHERED WITH SIKAROOF® BOARD ADHESIVE

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

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 technical service for further advice. Theoretical number of beads for a flat surface.

Middle zone 3 beads (25-30mm) per m²

Perimeter zone 4 beads (25-30mm) per m²

Corner zone 5 beads (25-30mm) per m²

4.5.4 INSTALLATION OF SIKA SARNAFIL® ROOFING MEMBRANE


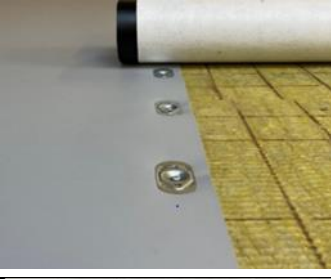


The surface of the insulation or substrate shall be inspected prior to installation of the Sika Sarnafil® AT roof membrane. The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination. Broken, delaminated, wet or damaged insulation boards shall be removed and replaced.

Substrate temperature: - 30°C min. / +60°C max.

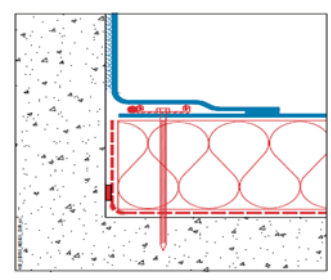
Ambient temperature: - 20°C min. / +60°C max.

"Refer to Product Datasheet"

4.5.5 MECHANICALLY FASTENED ROOFINGS SYSTEM - ROOFING AREA

	<p>Unroll the membrane in 90° to direction of the metal profile; fasten the roofing membrane 35 mm along the seam.</p>
	<p>Overlap the membranes by 120 mm.</p>
	<p>Overlap the membranes by 120 mm.</p>
	<p>Weld the seams by using a automatic hot air welding machine.</p>

4.5.5.1 PERIMETER SECUREMENT

	<p>Sarnabar and Sarnafil® T welding cord along the entire roof must be applied</p>
-------------------------------------------------------------------------------------	------------------------------------------------------------------------------------

5 BALLASTED ROOFING SYSTEM

5.1 GENERAL

- Sarnafil® AT FSH is fully compatible with all Sika Sarnafil® T accessories.
- Components other than supplied from Sika lies not in the responsibility of Sika.

5.2 MEMBRANES

Refer to Product Datasheet.

5.3 PERIMETER SECUREMENT

Perimeter securement shall be installed along of the entire roof.

5.4 EXECUTION / APPLICATION

5.4.1 SUBSTRATE PREPARATION

The roof deck and existing roof construction must be structurally sound to provide support for the new roof system. The Owner's Representative shall ensure that the roof deck is secured to the structural framing according to local building code and in such a manner as to resist all anticipated wind uplifts in that location.

5.4.1.1 NEW CONSTRUCTION

Structural Concrete Deck & Precast/Pre-stressed Concrete Panel Deck:

The surface shall have a smooth and level finish and shall be free of dust, excess moisture, oil-based curing agents and loose debris. Sharp ridges or other projections above the surface shall be removed before roofing. A minimum concrete quality of C20/25 is required.

5.4.1.2 RE-ROOFING WITH REMOVAL OF EXISTING BITUMEN ROOFING

General Criteria

All existing roofing (bitumen layers, thermal insulation), base flashing, or deteriorated metal flashings shall be removed. Remove only that amount of roofing and flashing which can be made weathertight with new materials during a one-day period or before the onset of inclement weather.

Structural Concrete Deck & Precast/Prestressed Concrete Panel Deck:

The roof deck shall be smooth, even, free of dust, dirt, excess moisture or oil and be structurally sound. Sharp ridges, other projections and accumulations of bitumen above the surface shall be removed to ensure a smooth surface before roofing. Any deteriorated decking shall be repaired.

All joints between precast units shall be grouted. Any differentials in height between precast units shall be treated for a smooth transition. Any deteriorated decking shall be repaired.

5.4.1.3 REROOFING WITH REMOVAL OF EXISTING SINGLE-PLY ROOFING

The Owner's Representative and Applicator shall determine the condition of the roof deck.

5.4.1.4 REROOFING OVER EXISTING SINGLE PLY ROOFING

The Owner's Representative and Applicator shall determine the condition of the roof deck.

The required refurbishment has to be defined and coordinated with the Owner and Sika's representative. Deteriorated or wet materials are to be removed and replaced.

Sarnafil® AT FSH membrane can be applied directly on any type of single ply membranes. Surface needs no special cleaning.

5.4.1.5 REROOFING OVER EXISTING BITUMEN ROOFING

The Owner's Representative and Applicator shall determine the condition of the existing roof deck and old roof system. Areas with deteriorated or wet materials are to be removed and replaced.

Sarnafil® AT FSH is allowed to be applied directly on sanded or slated bituminous membranes.

5.4.2 SUBSTRATE INSPECTION / CONDITION

A dry, clean and smooth substrate shall be prepared to receive the Sarnafil® FSH roof membrane.

The Applicator shall inspect the substrate for defects such as excessive surface roughness, contamination, structural inadequacy, or any other condition that will adversely affect the quality of work.

The substrate shall be clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil, grease and bitumen. Roofing shall not start until all defects have been corrected.

All roof surfaces shall be free of water, ice and snow.

Sarnafil® AT FSH shall be applied over compatible and accepted substrates only.

5.4.3 INSTALLATION OF SIKA SARNAFIL® ROOFING MEMBRANE




The surface of the insulation or substrate shall be inspected prior to installation of the Sika Sarnafil® roof membrane. The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination. Broken, delaminated, wet or damaged insulation boards shall be removed and replaced.

Substrate temperature: - 30°C min. / +60°C max.

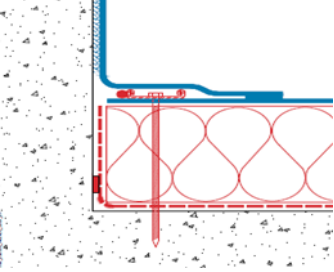
Ambient temperature: - 20°C min. / +60°C max.

"Refer to Product Datasheet"

5.4.4 BALLASTED ROOFINGS SYSTEM - ROOFING AREA

	Unroll the membrane on suitable substrate.
	Overlap the membrane by 80 mm.
	Weld the seams by using a automatic hot air welding machine.

5.4.4.1 PERIMETER SECUREMENT

	Sarnabar and Sarnafil® T welding cord along the entire roof must be applied.
-------------------------------------------------------------------------------------	------------------------------------------------------------------------------

6 ADHERED ROOFING SYSTEM

6.1 GENERAL

- Sarnafil® AT FSH SA is fully compatible with all Sika Sarnafil® T accessories
- Components other than supplied from Sika lies not in the responsibility of Sika.


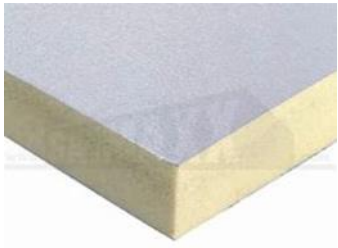
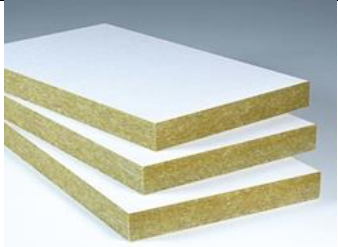


6.2 MEMBRANES


Refer to Product Datasheet.

6.3 PEEL STOP



Peel stop shall be installed along the perimeter of the entire roof.

6.4 APPLICABLE INSULATION BOARDS

	<p>Sarnatherm® PIR GT / Kingspan TR 26 A rigid isocyanurate foam insulation with aluminium facer. Average Density: 30 - 40 kg/m³ Compressive Strength: > 100 kPa at 10% Deformation Fire Performance: Euroclass E Primer required <i>"Refer to Product Datasheet"</i></p>
	<p>Sarnatherm® PIR GT / Kingspan TR 27 A rigid isocyanurate foam insulation with glass fleece facer. Average Density: 30 - 40 kg/m³ Compressive Strength: > 100 kPa at 10% Deformation Fire Performance: Euroclass E Primer not required <i>"Refer to Product Datasheet"</i></p>
	<p>Bondrock MV Mineral wool fibre board for fully adhered solutions. Compressive Strength: > 60 kPa at 10% Deformation Primer required <i>"Refer to Product Datasheet"</i></p>
	<p>EPS A rigid polystyrol foam, with block cut surfaces and a min. of 20 kg/m³ density. Compressive Strength: > 100 kPa at 10% Deformation Primer not required <i>"Refer to Product Datasheet"</i></p>
	<p>OSB 3 Oriented Strand Board according to BS EN300 2006 grade OSB/3. Primer required <i>"Refer to Product Datasheet"</i></p>

	<p>Plywood Plywood should comply to BS5268: Part 2: 2002 and BS EN 636 Exterior grade. Primer required <i>"Refer to Product Datasheet"</i></p>
	<p>Metal composite panel Product and supplier to be released by TM Roofing. Primer not required <i>"Refer to Product Datasheet"</i></p>

6.5 APPLICABLE PRIMERS

	<p>Primer 600 is a ready for use product, used as primer for applying Sarnafil® AT FSH SA membrane and/or Sarnafil® AT FSA P for roofing upstands. Consumption depends on the roughness and absorbency of the substrate and ranges from 150 g/m² to 500 g/m². <i>"Refer to Product Datasheet"</i></p>
	<p>Primer 780 (VOC Free) is a ready for use product, used as primer for applying Sarnafil® AT FSH SA membrane and/or Sarnafil® AT FSA P for roofing upstands. Consumption depends on the roughness and absorbency of the substrate and ranges from 50 g/m² to 150 g/m². <i>"Refer to Product Datasheet"</i></p>

6.6 EXECUTION / APPLICATION

6.6.1 SUBSTRATE PREPARATION

The roof deck and existing roof construction must be structurally sound to provide support for the new roof system. The Owner's Representative shall ensure that the roof deck is secured to the structural framing according to local building code and in such a manner as to resist all anticipated wind uplifts in that location.

6.6.1.1 NEW CONSTRUCTION

Corrugated/Profiled Steel Deck:

Country specific approved corrugated/profiled steel deck. The steel deck shall confirm a min. quality of Steel S 280 (280 N/m² tensile strength) with a thickness of ≥ 0.7 mm and be installed according to local building code.

Wood Deck:

Country specific approved wood deck. The deck shall conform the requirements for fire performance and rot-resistance. Wood deck shall be installed according to local building code.

Min. Thickness:

- Timber / OSB 3 min. 24 mm
- Plywood min. 22 mm

Structural Concrete Deck & Precast/Pre-stressed Concrete Panel Deck:

The surface shall have a smooth and level finish and shall be free of dust, excess moisture, oil-based curing agents and loose debris. Sharp ridges or other projections above the surface shall be removed before roofing. A minimum concrete quality of C20/25 is required.

6.6.1.2 RE-ROOFING WITH REMOVAL OF EXISTING BITUMEN ROOFING

General Criteria

All existing roofing (bitumen layers, thermal insulation), base flashing, or deteriorated metal flashings shall be removed. Remove only that amount of roofing and flashing which can be made weathertight with new materials during a one-day period or before the onset of inclement weather.

Corrugated/Profiled Steel Deck:

Country approved corrugated/profiled steel deck. All rusted or deteriorated decking shall be defined to determine method of treatment or replacement. Surface-only rusted metal shall be sanded and treated with rust inhibiting paint. Sections that have rusted deeper than the surface or are not structurally sound shall be removed and replaced.

Wood Deck:

Country specific approved wood deck. All rotted or deteriorated wood shall be removed and replaced. Deck attachment shall conform to local code requirements. Fastener heads shall be recessed into the wood surface.

Min. Thickness:

- Timber / OSB 3 min. 24 mm
- Plywood min. 22 mm

Structural Concrete Deck & Precast/Prestressed Concrete Panel Deck:

The roof deck shall be smooth, even, free of dust, dirt, excess moisture or oil and be structurally sound. Sharp ridges, other projections and accumulations of bitumen above the surface shall be removed to ensure a smooth surface before roofing. Any deteriorated decking shall be repaired.

All joints between precast units shall be grouted. Any differentials in height between precast units shall be treated for a smooth transition. Any deteriorated decking shall be repaired.

6.6.1.3 REROOFING WITH REMOVAL OF EXISTING SINGLE-PLY ROOFING

The Owner's Representative and Applicator shall determine the condition of the roof deck and existing insulation. Deteriorated or wet materials are to be removed and replaced. After removal of single-ply membrane inspect insulation boards and reuse only if dry and in stable condition. Add an approved new insulation board. Fasten the new insulation boards in accordance to country specific wind uplift.

6.6.1.4 REROOFING OVER EXISTING SINGLE PLY ROOFING

The Owner's Representative and Applicator shall determine the condition of the roof deck and existing insulation.

On-site test is needed to confirm expected pull-out values.

The required refurbishment has to be defined and coordinated with the Owner and Sika's representative. Deteriorated or wet materials are to be removed and replaced.

Sarnafil® AT FSH SA membrane can be applied directly on FPO/TPO single ply membranes after positive adhesion tests. Surface needs to be prepared accordingly with cleaning.

6.6.1.5 REROOFING OVER EXISTING BITUMEN ROOFING

The Owner's Representative and Applicator shall determine the condition of the existing roof deck and old roof system. On-site test is needed to confirm expected pull-out values. Areas with deteriorated or wet materials are to be removed and replaced.

Sarnafil® AT FSH SA is allowed to be applied directly on sanded or slated bituminous membranes with Primer 600/780. In case of additional layer or a thermal insulation board (e.g PUR/PIR or EPS) they need to be fixed mechanically or with SikaRoof Board Adhesive.

6.6.2 SUBSTRATE INSPECTION / CONDITION

A dry, clean and smooth substrate shall be prepared to receive the Sarnafil® FSH SA roof membrane.

The Applicator shall inspect the substrate for defects such as excessive surface roughness, contamination, structural inadequacy, or any other condition that will adversely affect the quality of work.

The substrate shall be clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil, grease and bitumen. Roofing shall not start until all defects have been corrected.

All roof surfaces shall be free of water, ice and snow.

Sarnafil® AT FSH SA shall be applied over compatible and accepted substrates only.

Due to the self-adhesion of the membrane all layers of the roof build-up and substrate must be secured against wind uplift.

6.6.3 INSULATION INSTALLATION

General Criteria:

Insulation shall be installed according to insulation manufacturer's instructions. Install tapered insulation in accordance with insulation manufacturer's shop drawings. Do not install more insulation board than can be covered with Sarnafil® AT FSH SA membrane by the end of the day or the onset of inclement weather.

6.6.3.1 MECHANICAL ATTACHMENT

According to the country specific wind uplift, the Insulation boards shall be mechanically fastened to the deck with approved fasteners and plates at a rate according to the insulation manufacturer's and/or Sika recommendations for fastening rates and patterns. The quantity and locations of the fasteners and plates shall also cause the insulation boards 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 insulation board shall be installed tightly against the adjacent boards on all sides.

Fasteners are to be installed consistently in accordance with fastener manufacturer' recommendations. Fasteners are to have minimum penetration into structural deck recommended by the fastener manufacturer and/or Sika's recommendations.

Use fastener tools with a depth locator and torque-limiting attachment as recommended or supplied by fastener manufacturer to ensure proper installation.

6.6.3.2 ADHERED WITH SIKAROOF® BOARD ADHESIVE

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

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 technical service for further advice. Theoretical number of beads for a flat surface.

Middle zone 3 beads (25-30mm) per m²

Perimeter zone 4 beads (25-30mm) per m²

Corner zone 5 beads (25-30mm) per m²

6.6.4 INSTALLATION OF SIKA SARNAFIL® ROOFING MEMBRANE

The surface of the insulation or substrate shall be inspected prior to installation of the Sika Sarnafil® roofing membrane. The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination. Broken, delaminated, wet or damaged insulation boards shall be removed and replaced.



Substrate temperature: + 5C min. / +60°C max.

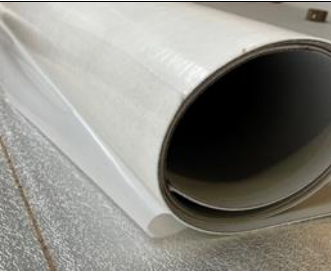





Ambient temperature: + 5C min. / +60°C max.


It is important to pay close attention to avoiding dew point conditions. The application temperature must exceed the dew point by at least 3°C. The dew point can be defined with an dew-point device.

“Refer to Product Datasheet”

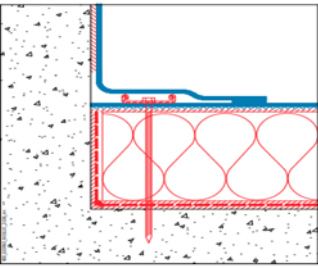
6.6.5 APPLICATION OF SARNAFIL® AT FSH SA

	<p>Preparing the substrate: Primer 600 or Primer 780 if required. <i>“Refer to Product Datasheet”</i></p>
	<p>Membrane is rolled out and aligned in the correct position with the correct overlaps.</p>

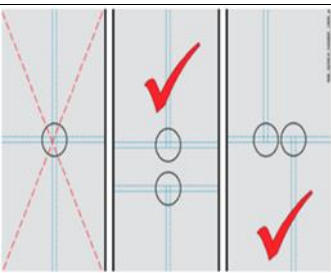

	<p>Roll back half of the membrane (or a minimum of 0.2 m) and adhere the whole width to the substrate. Cut release-liner over the width of the membrane.</p>
	<p>Adhere min. 20 cm of the membrane (over the whole width) to the substrate.</p>
	<p>Remove release liner on half of the membrane by drawing off. Adhere membrane to the substrate. We recommend using a brush or a squeegee to prevent blisters. Execute the same procedure on the other half of the membrane.</p>
	<p>Overlap the membranes by 80 mm.</p>
	<p>Overlap the membranes by 80 mm.</p>
	<p>After the membrane is applied, use a water filled or steel roller to press down the membrane properly to the substrate.</p>

	<p>Membrane overlaps are welded by using a hot-air welding machine.</p>
-----------------------------------------------------------------------------------	-------------------------------------------------------------------------

6.6.5.1 Peel Stop

	<p>Sarnabar® to be applied all along the roofing perimeter.</p>
-----------------------------------------------------------------------------------	-----------------------------------------------------------------

7 T-, CROSS AND BUTT JOINTS

	<p>Welds at transverse joints. By proper arrangement of Sarnafil® AT, all seams can be reduced to straight welded seams and transverse joint (T-joint). Cross joints are to be avoided.</p>
	<p>Butt joints: A maximum of 5 mm spacing between the membranes must be ensured. The butt joint shall be covered by a 200 mm Sarnafil® AT-25 cover strip to ensure maximum safety.</p>

8 INSTALLING PARAPET USING SARNAFIL® AT FSA P

	Position and remove Sarnafil® AT FSA P release liner.
	Mark the upper parapet edges.
	Attach the self-adhered membrane.
	Press the membrane into place with a suitable roller.
	Complete the final hot air seam welding.

LEGAL NOTE

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 products 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.

Sika Services AG
Target Market Roofing
Industriestrasse 26
6060 Sarnen
Switzerland
www.sika.com

Version given by
Reto Graenicher
Phone: +41 79 214 41 46
Mail: graenicher.reto@ch.sika.com

Sarnafil® AT self-healing
Roofing
March 2023, V1
Document ID

English
Company Confidential