



ROOFING

SIKA Sarnafil® SOLUTIONS

FOR NEW CONSTRUCTIONS AND REFURBISHMENTS

BUILDING TRUST



SIKA'S CORPORATE PROFILE



- On 5 continents
- In 101 countries
- More than 200+ production and marketing companies
- 20,000+ employees worldwide

Sika AG, located in Baar, Switzerland, is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, facades).

Sika's product lines feature high-quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems. Worldwide local presence in 101 countries and some 20,000 employees link customers directly to Sika and guarantee the success of all partners. Sika generated annual sales of CHF 7.09 billion in 2018.

SIKA - A COMPANY WITH MORE THAN 100 YEARS OF HISTORY



Sika Zurich



The history of Sika began in 1910, when Kaspar Winkler, the founder of Sika, invented Sika-1, a quicksetting waterproofing admixture for mortar, used to waterproof the Gotthard Tunnel, thus enabling the Swiss railway company to electrify this important connection between Northern and Southern Europe. Kaspar Winkler recognized an upcoming global need for his "trailblazing" admixtures and launched subsidiaries around the world. Already in the 1930s, 15 Sika subsidiaries in Europe, USA, Argentina, Brazil and Japan established new construction chemicals markets.

Today Sika is the global technology and market leader in specialty chemicals for Construction and Industry, providing complete systems and problem solutions.

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SIKA ROOFING SYSTEMS

Overview

SINGLE PLY MEMBRANES



Canon Opto Factory, Shah Alam, Malaysia

PVC

Type

PVC membranes

Brands

■ Sarnafil® ■ Sikaplan®

Advantages

- Established technology with the longest track record (≥ 50 years)
- More than 1,000,000 m² installed in Malaysia
- Availability of products for exposed roofing applications with high fire ratings / extended fire resistance
- Easy to repair
- Possibility of customized design solutions (colours, profiles, and roof graphics)
- Homogeneous hot air welded joints
- Easy to handle on site

- Suitable for use and exposure in different climatic conditions
- Fast installation independent of the weather
- Good vapour permeability
- Highly flexible
- Flame free installation
- Recyclable
- High solar reflectivity
- Resistant to root penetration and standing water
- FM approved



Osram Opto Semi Conductors, Penang (Malaysia)

TPO

Type

Polyolefin membranes

Brands

■ Sarnafil®

Advantages

- Proven track record for over 25 years
- High chemical resistance
- Suitability for direct application on such substrates, as bitumen, EPS and XPS insulation (polystyrenes)
- Availability of products for exposed roofing applications with high fire ratings / extended fire resistance
- Plasticizer free (no migration / contamination or leaching)
- Long life expectancy

- Homogeneous hot air welded joints
- Suitable for use and exposure in different climatic conditions
- Fast installation independent of the weather
- Outstanding ecological profile
- Flame free installation
- Recyclable
- FM approved

MATERIAL COMPETENCE

Sika Roofing Systems for Exposed Roof and Concealed Roof

SINGLE PLY MEMBRANES

	EXPOSED ROOF		
System	Sarnafil® S-327 L	Sarnafil® G-410 L Felt	Sarnafil® TS-77
Solution	PVC	PVC	TPO
Material	Mechanically Fastened	Fully Adhered	Mechanically Fastened
Application	<ul style="list-style-type: none"> ■ Unique lacquered surface prevents soiling, fast installation and outstanding resistant to weathering ■ Excellent tensile and tear strength ■ Recyclable 	<ul style="list-style-type: none"> ■ High aesthetical performance and design possibilities ■ Wide range of colour ■ Full adhesion to substrates ■ Limited lateral underflow ■ Lacquered surface ■ Recyclable 	<ul style="list-style-type: none"> ■ High dimensional stability ■ High resistance against impact load ■ High chemical resistant ■ No risk of delamination or water-wicking ■ Compatible to old bitumen ■ Recyclable
Characteristic	1.2 mm / 1.5 mm / 2.0 mm	1.2 mm / 1.5 mm / 2.0 mm	1.2 mm / 1.5 mm / 2.0 mm
Effective Thickness	≥ 1000 N / 50 mm	≥ 650 N / 50 mm	≥ 1000 N / 50 mm
Tensile Strength	≥ 12%	≥ 45%	≥ 13%
Elongation	≤ 0.4%	≤ 0.2%	≤ 0.2%
Dimension Stability	Passes	Passes	Passes
UV Exposure	Passes	Passes	Passes
Resistance to Impact	Passes	Passes	Passes
Water Vapour Transmission	Passes	Passes	Passes

* Note: Please refer to Product Data Sheet for more information.

CONCEALED ROOF

Sarnafil® G-476

PVC

Loosely Laid / Fully Adhered

- Outstanding root resistant
- Excellent weldability and dimensional stability
- High resistance to mechanical impact
- Recyclable

1.2 mm / 1.5 mm / 2.0 mm

≥ 8.5 N / mm²

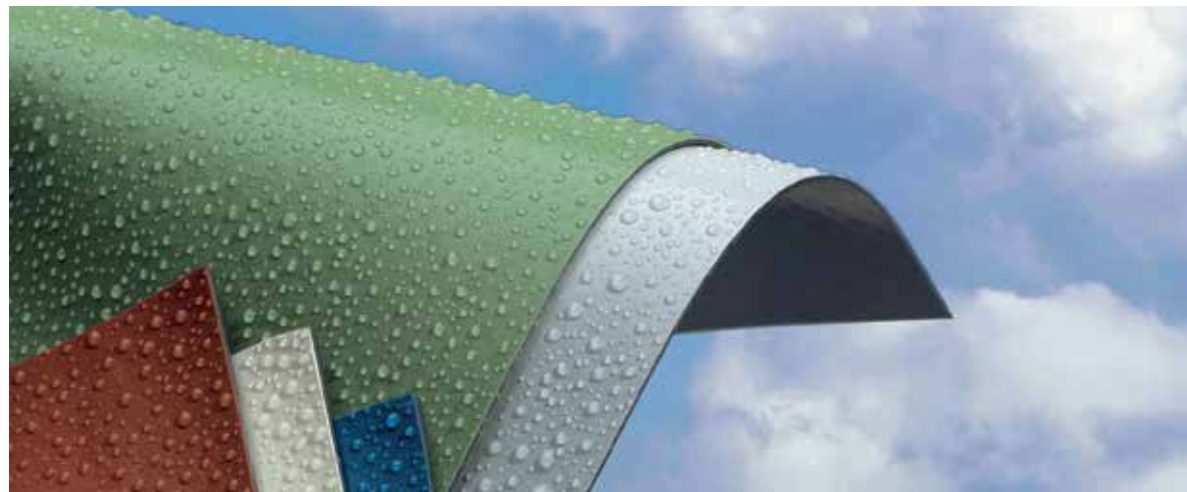
≥ 180%

≤ 0.2%

Passes

Passes

Passes



SINGLE PLY MEMBRANE SYSTEM ON CONCRETE ROOF

EXPOSED CONCRETE ROOFS

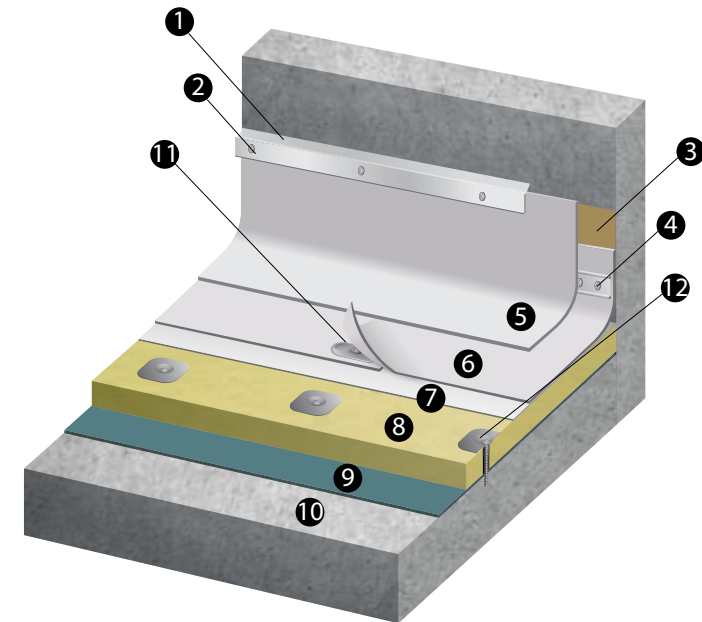
MECHANICAL FASTENED ROOF SYSTEM



Post Office Kuantan, Pahang (Malaysia)

Characteristics & Benefits

- Fast installation – covering large areas in a short time
- Design to resist the highest wind uplift forces
- Can be installed in almost any weather
- Suitable for new and refurbishment existing concrete roof solution
- Cool roof system – High solar reflective membrane



System Design / Build-up

1. Sikaflex® Sealant
2. S-Termination Bar III with Sarnafast®
3. Sarnacol® adhesive
4. S-U Bar with Sarnafast®
5. Sarnafil® G 410 L detailing membrane
6. Sarnafil® S-327 L
7. S-Felt as separation layer
8. Sarnatherm® XPS
9. Vapour Control Layer
10. Concrete roof
11. Sarnafil® membrane washer
12. Sarnafil® insulation washer

EXPOSED CONCRETE ROOFS

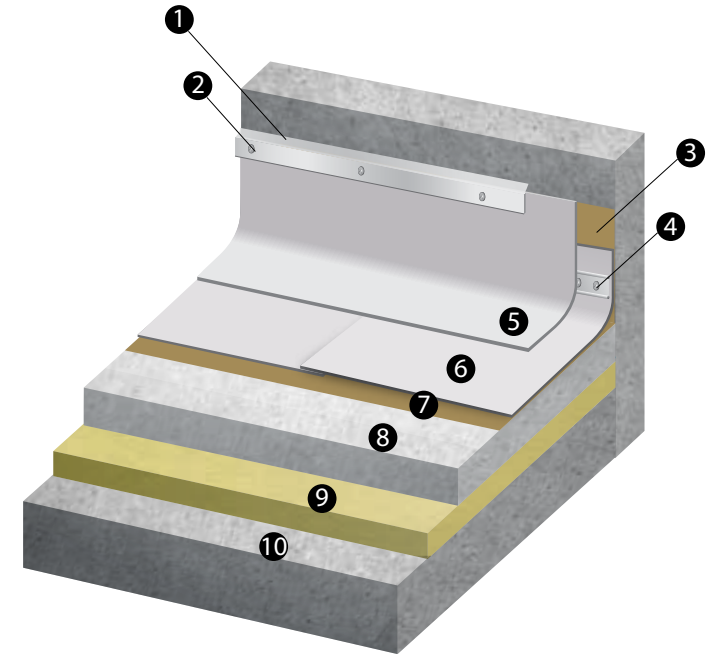
FULLY ADHERED ROOF SYSTEM



Aeon Tebrau City Shopping Mall, Johor Bahru (Malaysia)

Characteristics & Benefits

- Suitable for simple and complex roof shapes
- High aesthetical performance and individual design possibilities
- No visible fasteners and penetrations of roof deck
- Fully bonded system – low risk of lateral water underflow
- Cool roof system – high solar reflective membrane



System Design / Build-up

- | | |
|--|---------------------------|
| 1. Sikaflex® Sealant | 6. Sarnafil® G 410 L Felt |
| 2. S-Termination Bar III with Sarnafast® | 7. Sarnacol® adhesive |
| 3. Sarnacol® adhesive | 8. Protective concrete |
| 4. S-U Bar with Sarnafast® | 9. Sarnatherm® XPS |
| 5. Sarnafil® G 410 L detailing membrane | 10. Concrete roof |

CONCEALED CONCRETE ROOFS

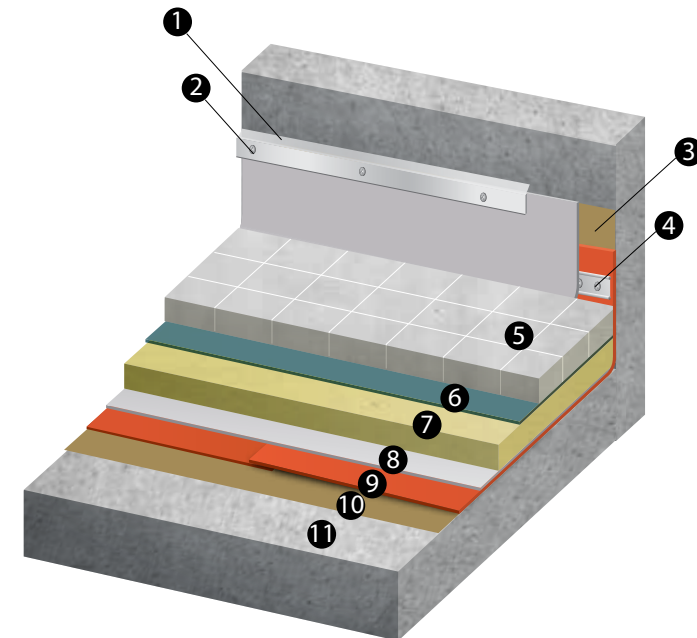
CONCEALED BALLASTED / UTILITY DECK ROOF SYSTEM



Ikano Toppen Shopping Centre, Johor Bahru (Malaysia)

Characteristics & Benefits

- Fast and easy installation – loose laid or fully bonded system
- Easy to maintain, low maintenance cost
- Protected waterproofing membrane
- Increased resistance to mechanical impact
- Membrane resists minor structural cracks and settlement



System Design / Build-up

1. Sikaflex® Sealant
2. S-Termination Bar III with Sarnafast®
3. Sarnacol® adhesive
4. S-U Bar with Sarnafast®
5. Finishes : Ballasted with concrete / Paving
6. Vapour Control Layer
7. Sarnatherm® XPS
8. S-Felt geotextile as separation layer
9. Sarnafil® G-476 membrane
10. Sarnacol® adhesive
11. Concrete roof

CONCEALED CONCRETE ROOFS

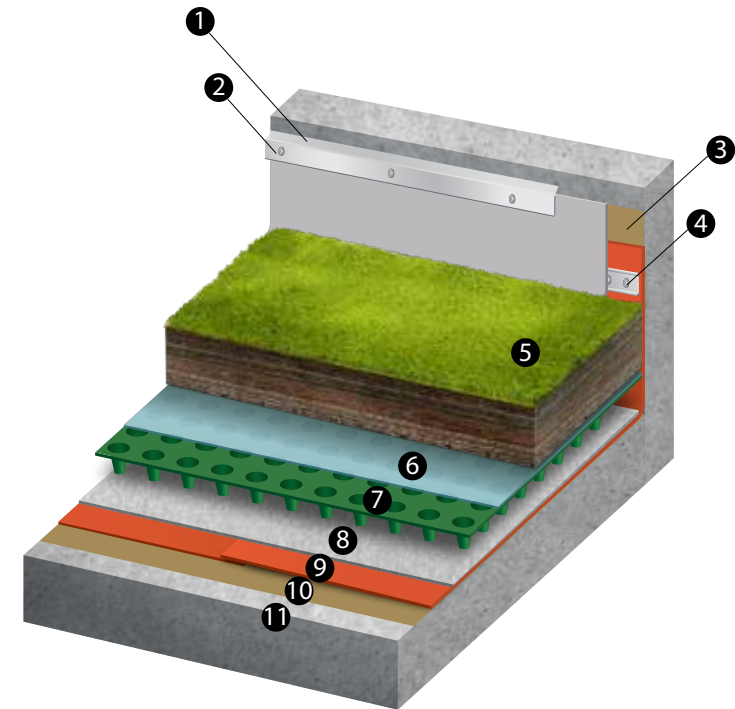
GREEN ROOF SYSTEM



Memorial Tun Hussein Onn, Kuala Lumpur (Malaysia)

Characteristics & Benefits

- Reduction of heat-island effect
- Improved thermal performance of the building
- Improved rain water retention
- Excellent root penetration resistant membrane
- Highly puncture and water ponding resistant



System Design / Build-up

1. Sikaflex® Sealant
2. S-Termination Bar III with Sarnafast®
3. Sarnacol® adhesive
4. S-U Bar with Sarnafast®
5. Soil with plants
6. Filter sheet layer
7. Sika® SarnaDrain board
8. S-Felt geotextile as separation layer
9. Sarnafil® G-476 membrane
10. Sarnacol® adhesive
11. Concrete roof

SINGLE PLY MEMBRANE SYSTEM ON STEEL ROOF

EXPOSED STEEL ROOFS

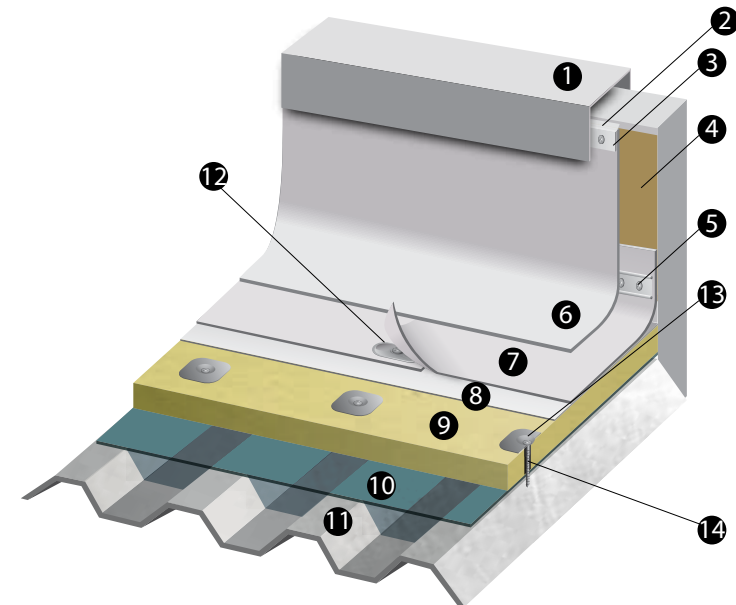
SARNAFAST MECHANICALLY FASTENED SYSTEM



Paramit Factory, Butterworth, Penang (Malaysia)

Characteristics & Benefits

- Fast installation – covering large areas in a short time
- Design to resist the highest wind uplift forces
- Can be installed in almost any weather
- Suitable for new and refurbishment existing steel roof solution
- Cool roof system – high solar reflective membrane



System Design / Build-up

1. Metal flashing
2. Sikaflex® Sealant
3. S-Termination Bar III with Sarnafast®
4. Sarnacol® adhesive
5. S-U Bar with Sarnafast®
6. Sarnafil® G 410 L / TG 66 detailing membrane
7. Sarnafil® S-327 L / Sarnafil® TS-77 membrane
8. S-Felt geotextile as separation layer
9. Sarnatherm® XPS / PIR
10. Vapour control layer
11. Steel roof
12. Sarnafil® membrane Washer
13. Sarnafil® insulation washer
14. Sarnafast® fastener x length

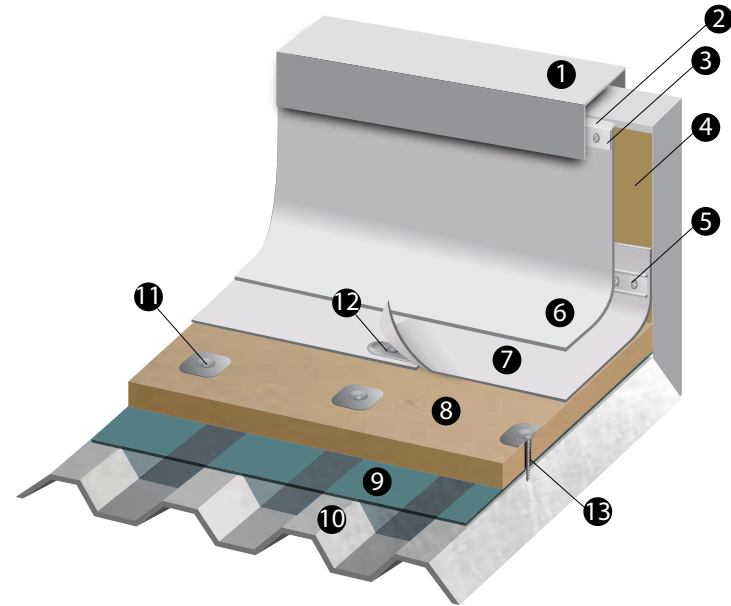
EXPOSED STEEL ROOFS



FM APPROVED ROOF SYSTEM



Ikea Store Batu Kawan, Penang (Malaysia)



Characteristics & Benefits

- FM Global (Factory Mutual) approved roof system
- FM rating 1 - 75 to 135
- Local supply of all system components
- Design to resist the highest wind uplift forces
- Cool roof system - high solar reflective membrane

System Design / Build-up

- 1. Metal flashing
- 2. Sikaflex® Sealant
- 3. S-Termination Bar III with Sarnafast®
- 4. Sarnacol® adhesive
- 5. S-U Bar with Sarnafast®
- 6. Sarnafil® G 410 L / TG 66 detailing membrane
- 7. Sarnafil® S-327 EL / Sarnafil® TS-77 membrane
- 8. Sarnatherm® PIR / Mineral wool insulation
- 9. Vapour control layer
- 10. Steel Roof
- 11. Sarnafil® insulation washer
- 12. Sarnafil® membrane washer
- 13. Sarnafast® fastener x length

EXPOSED STEEL ROOFS

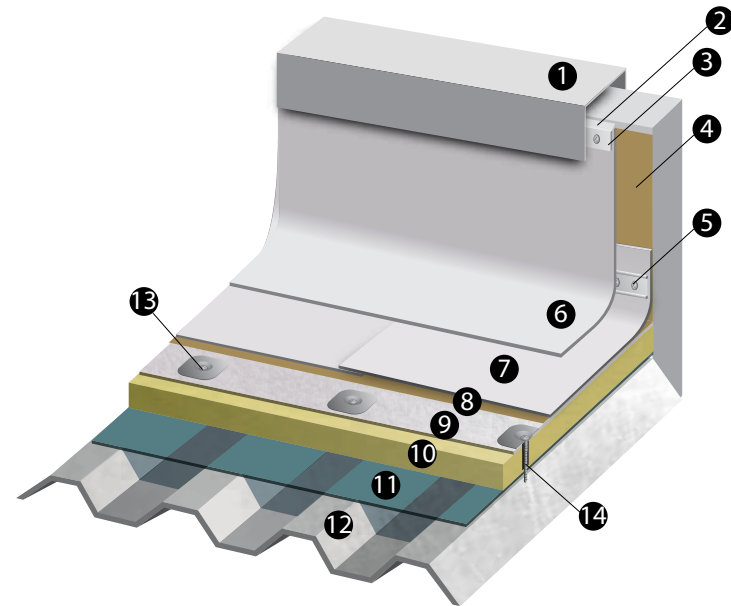
FULLY ADHERED ACOUSTICS ROOF SYSTEM



Tropicana Aman Residences, Shah Alam, Selangor (Malaysia)

Characteristics & Benefits

- Suitable for simple and complex roof shapes
- High aesthetical performance and individual design possibilities
- High acoustics performance roof system
- Low impact / drumming noise
- Cool roof system – high solar reflective membrane



System Design / Build-up

1. Metal flashing
2. Sikaflex® Sealant
3. S-Termination Bar III with Sarnafast®
4. Sarnacol® adhesive
5. S-U Bar with Sarnafast®
6. Sarnafil® G 410 L detailing membrane
7. Sarnafil® G 410 L felt membrane
8. Sarnacol® adhesive
9. Fibre cement board
10. Sarnatherm® XPS
11. Vapour control layer
12. Steel roof
13. Sarnafil® insulation washer
14. Sarnafast® fastener x length

EXPOSED STEEL ROOFS

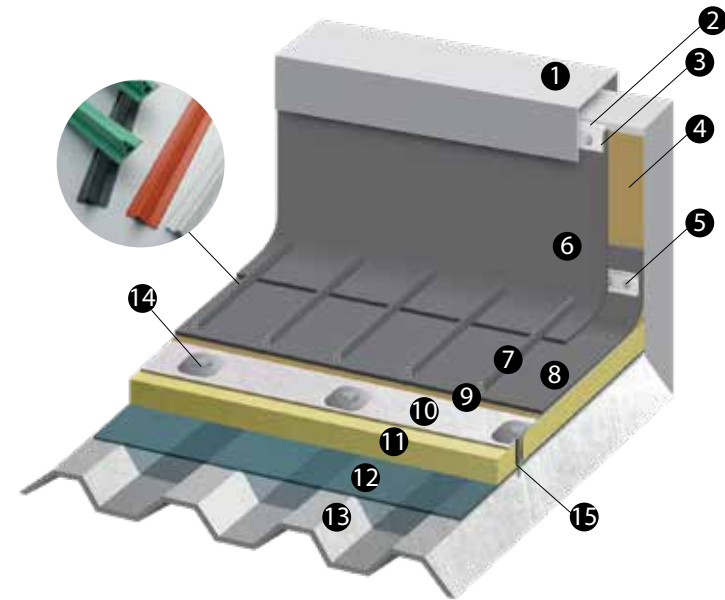
FULLY ADHERED DÉCOR PROFILE ROOF SYSTEM



Hotel Stripes, Kuala Lumpur (Malaysia)

Characteristics & Benefits

- Aesthetics of metal roofs, but the watertight integrity of hot-air welded thermoplastic membrane
- Design flexibility to express your creativity as never before - regardless of roof slope, shape, or complexity
- Freedom to choose rib length and spacing



System Design / Build-up

1. Metal flashing
2. Sikaflex® Sealant
3. S-Termination Bar III with Sarnafast®
4. Sarnacol® adhesive
5. S-U Bar with Sarnafast®
6. Sarnafil® G 410 L detailing membrane
7. Decor profile design
8. Sarnafil® G 410 L felt membrane
9. Sarnacol® Adhesive
10. Fiber cement board layer
11. Sarnatherm® XPS
12. Vapour control layer
13. Steel roof
14. Sarnafil® insulation washer
15. Sarnafast® fastener x length

DECORATIVE CLADDING ROOF

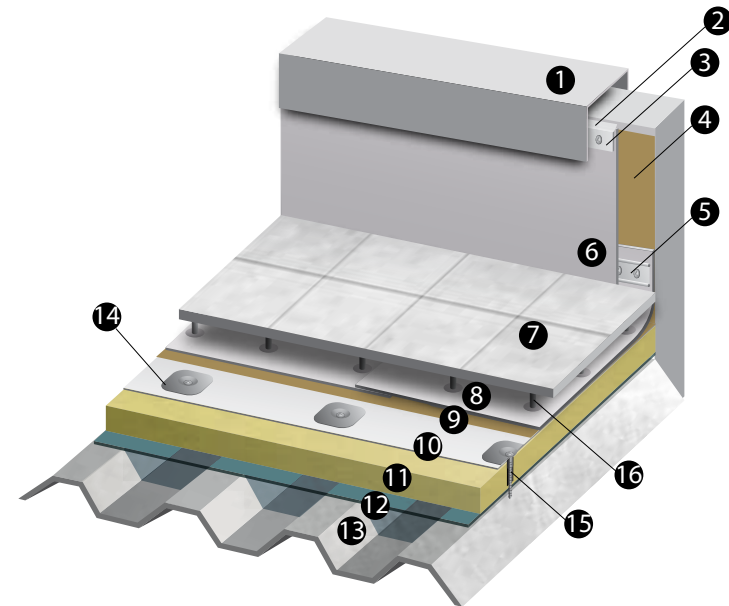
ENGINEERED FULLY ADHERED DECORATIVE CLADDING ROOF SYSTEM



Malaysia International Trade and Exhibition Centre (MITEC), Kuala Lumpur (Malaysia)

Characteristics & Benefits

- Reliable water tightness solution for decorative cladding roof system
- Highly aesthetic and unique appearance design
- Freedom of design for architects and engineers
- Membrane underneath ensured 100% water tightness
- Long lasting waterproofing protection



System Design / Build-up

- | | |
|--|---|
| 1. Metal flashing | 10. Fiber cement board |
| 2. Sikaflex® Sealant | 11. Sarnatherm® XPS / PIR / Mineral wool insulation |
| 3. S-Termination Bar III with Sarnafast® | 12. Vapour control layer |
| 4. Sarnacol® adhesive | 13. Steel roof |
| 5. S-U Bar with Sarnafast® | 14. Sarnafil® insulation washer |
| 6. Sarnafil® G 410 L detailing membrane | 15. Sarnafast® fastener x length |
| 7. Decorative cladding finishes | 16. Sika® Roof Anchor PVC |
| 8. Sarnafil® G 410 L felt membrane | |
| 9. Sarnacol® adhesive | |

SOLUTIONS FOR ROOF RERURBISHMENT

Common Roof Leakage Problem

- Water ponding problem - limited water run off
- Crack issue - water ingress
- Poor maintenance - poor drainage
- Root growth or moss
- Blistering and bubbling of existing membrane
- Poor detailing and termination - joint sealant
- Corrosion

Characteristic And Benefit Of Single ply Membrane Solutions

- Fast, clean and safe solution
- Minimal removal cost
- No disturbance to existing occupier
- Easily clean and maintenance membrane allow entrapped moisture to release over time
- Easily clean and maintenance membrane
- Resists existing crack issue and water ponding problem
- 100% reliable and proven membrane system

CONCRETE ROOF

EXISTING ROOF SYSTEM

Exposed RC roof with existing torch on bitumen membrane or liquid applied membrane

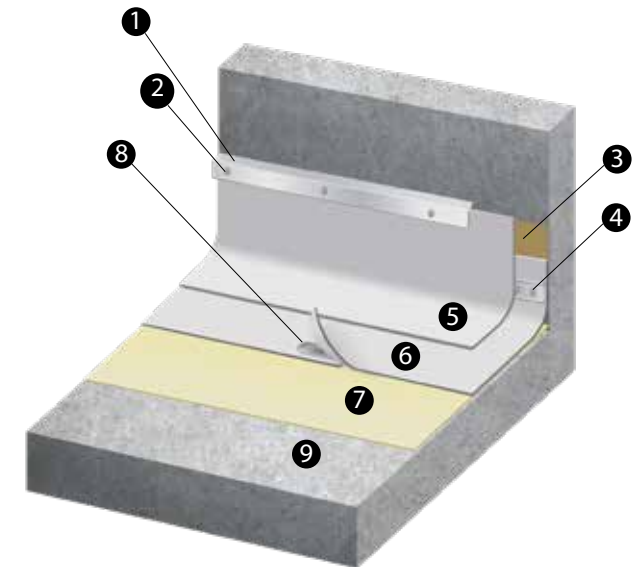
BEFORE



AFTER



Suk Selangor, State Government Office, Shah Alam, Selangor (Malaysia)



System Build-up

1. Sikaflex® Sealant
2. S-Termination Bar III with Sarnafast®
3. Sarnacol® adhesive
4. S-U Bar with Sarnafast®
5. Sarnafil® G 410 L detailing membrane
6. Sarnafil® S-327 L
7. S-Felt as separation layer
8. Sarnafil® membrane washer
9. Check and keep existing substrate condition

CONCRETE ROOF

EXISTING ROOF SYSTEM

Exposed RC roof with existing protective cement screed / concrete roof

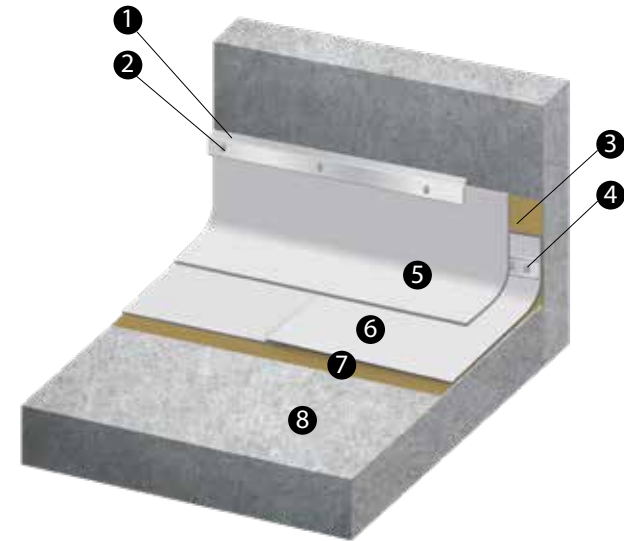
BEFORE



AFTER



AEON Tebran City, Shopping Mall, Tebran City, Johor Bahru (Malaysia)



System Build-up

1. Sikaflex® Sealant
2. S-Termination Bar III with Sarnafast®
3. Sarnacol® adhesive
4. S-U Bar with Sarnafast®
5. Sarnafil® G 410 L detailing membrane
6. Sarnafil® G 410 L Felt
7. Sarnacol® adhesive
8. Check and keep existing substrate condition

STEEL ROOF

EXISTING ROOF SYSTEM

Exposed steel roof

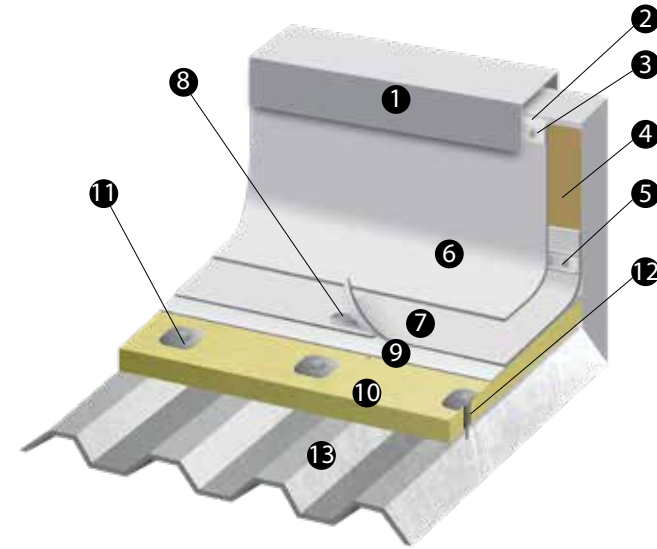
BEFORE



AFTER



Saxonia Factory, Taman Klang Jaya, Klang, Selangor. (Malaysia)



System Build-up

1. Metal flashing
2. Sikaflex® Sealant
3. S-Termination Bar III with Sarnafast®
4. Sarnacol® adhesive
5. S-U Bar with Sarnafast®
6. Sarnafil® G 410 L detailing membrane
7. Sarnafil® S-327 L
8. Sarnafil® membrane washer
9. S-Felt geotextile as separation layer
10. Sarnatherm® XPS
11. Sarnafil® Insulation washer
12. Sarnafast® fastener x length
13. Check and keep existing steel roof

STEEL ROOF

EXISTING ROOF SYSTEM

Exposed steel roof

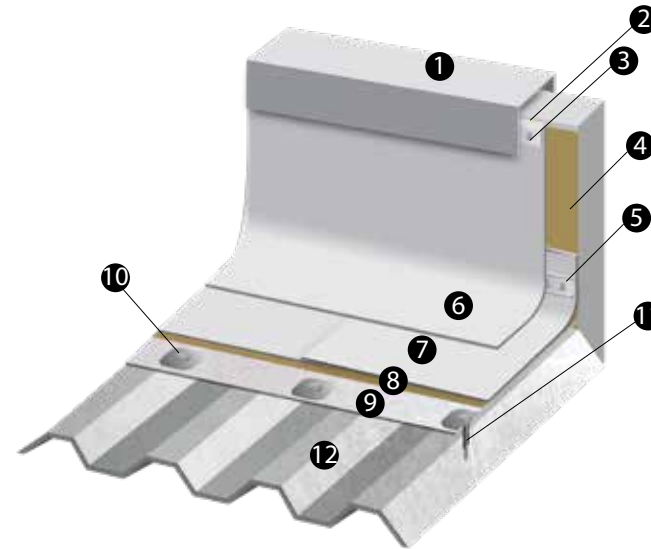
BEFORE



AFTER



Performing Art Centre, Kuala Lumpur (Malaysia)



System Build-up

1. Metal flashing
2. Sikaflex® Sealant
3. S-Termination Bar III with Sarnafast®
4. Sarnacol® adhesive
5. S-U Bar with Sarnafast®
6. Sarnafil® G 410 L detailing membrane
7. Sarnafil® G 410 L felt membrane
8. Sarnacol® adhesive
9. Fibre cement board
10. Sarnafil® insulation washer
11. Sarnafast® fastener x length
12. Check and keep existing steel roof

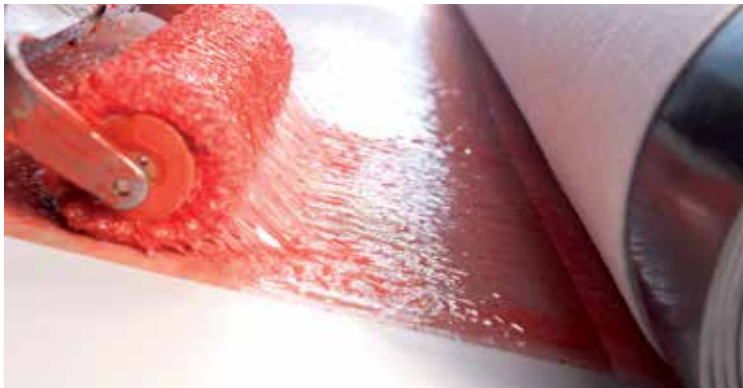
ROOFING ACCESSORIES AND ANCILLARY PRODUCTS

ADHESIVES

Adhered roofing systems are one of the main specialties of Sika Roofing. Our extensive experience in adhesive technologies has resulted in a wide range of high-performance adhesives covering all of the possible bonding needs in roofing. Sika provides well proven solutions for bonding roofing membranes and thermal insulation to almost any common substrate.

CONTACT ADHESIVES

High quality adhesives designed for bonding membranes to different substrates on roof areas or at upstands, flashings and perimeter termination areas.



- Excellent adhesion properties
- Full compatibility with Sika single ply membranes
- Wide range of adhesives suitable for all different substrates
- Immediate adhesion
- Single component products in the range

Sika Product

- Sarnacol® 2170
- Sarnacol® T 660
- Sarnacol® 808

PU-BASED MEMBRANE ADHESIVES

These are used in fully and partially adhered roofing systems to bond the membranes to various different substrates



- Excellent adhesion properties
- Full compatibility with Sika single ply felt-backed membranes
- Wide range of adhesives suitable for all different substrates
- Compatible with EPS / XPS insulation
- Bond very well in humid conditions
- Low solvent content
- Easy to use and handle

Sika Product

- Sarnacol® 2142 S
- Sarnacol® 2152

FASTENERS AND FIXINGS

Fasteners and fixings are crucial components, especially in mechanically fastened roof systems. Wind uplift forces and corrosion of the metal are the two most vertical influences that put tough demands on those components of a roofing system.

SARNAFAST®

High quality adhesives designed for bonding membranes to different substrates on roof areas or at upstands, flashings and perimeter termination areas.



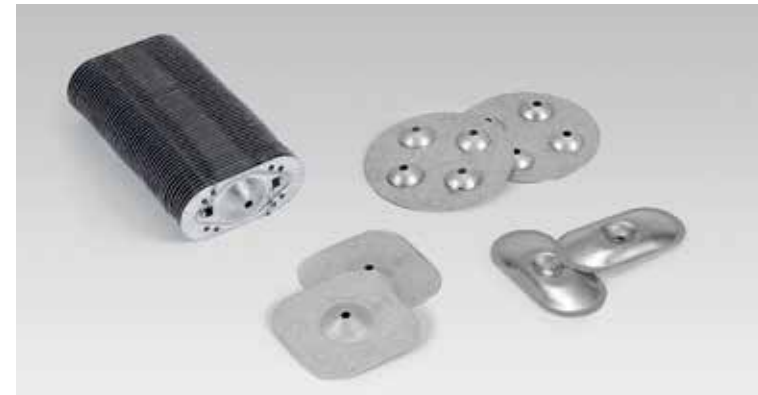
- Excellent corrosion resistance due to special **Durocoat®** protection coating, includes stainless steel screws in the range
- Suitable for most common substrates (steel, concrete, wood)
- Wide range of lengths
- Compatible with other fixing components (bars, pressure plates etc.)
- Excellent pull-out values

Sika Product

- **Sarnafast® SBF 6.0 mm** (standard)
- **Sarnafast® SBF-S-6.0 mm** (stainless steel)

WASHERS AND TERMINATION PLATES

There are used in combination with Sarnafast screws to provide proper mechanical fastening of the membranes or thermal insulation boards.



- Very high corrosion resistance (galvanized)
- Suitable for soft and hard substrates
- Compatible with **Sarnafast®** screws

Sika Product

- **Sarnafast® KTL 82x40**
- **Sarnafast® IF/IG-C**
- **Sarnafast® DTL 70x70**

TUBE SYSTEM

Polyamide 6 plastic tube elements developed specially for spot and linear fastening of single ply membranes.



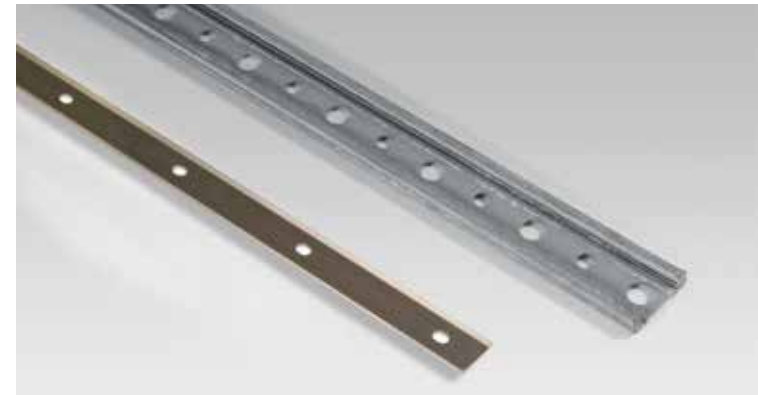
- Thermally broken fastening solution with no chance of cold bridging
- High quality polyamide plastic provides resistance to very low temperatures and high pull-out values
- Four spikes on the tube for spot fastening gives improved membrane anchoring
- Compatible with the appropriate **Sarnafast**® screws and fixing bars

Sika Product

- **Sarnafast**® SFT-50

FASTENING PROFILES / SARNABARS®

Metal profiles specially designed for linear and perimeter membrane fastening.



- 2 stiffening ribs and 1.5 mm thick steel provides extraordinary mechanical properties
- Very high corrosion resistance from the hot dipped galvanized steel
- Compatible with to **Sarnafast**® screws
- Universal linear distribution of wind forces gives the possibility of wider gaps between fastening rows in the main roof areas and provides the highest security in perimeter zones

Sika Product

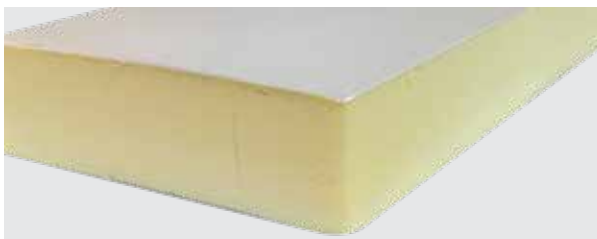
- **S-U Bar**
- **S-Termination Bar**

THERMAL INSULATION

This is one of the most important system components in whole roofing structure, providing resistance to cold and heat, keeping the required temperatures inside the buildings and at the same time helping to save energy for the heating or cooling. The Sika roofing range incorporates the most efficient types of thermal insulation available on the market.

PIR

PIR is a rigid polyisocyanurate foam produced in a chemical process (exothermic chemical reaction) made by mixing MDI, polyols, blowing agents (usually pentan gas) and other additives. The products are known for one of the lowest thermal conductivities.



- Very good fire resistance (more than 250 °C)
- Extremely low thermal conductivity value of 0.023 - 0.028 W/m·K
- High compressive strength in the range of 120 - 160 kPa which is also sufficient for some ballasted applications
- Lightweight of 30 - 40 kg/m³

Sika Product
■ SarnaTherm® R

MINERAL WOOL

Mineral (stone) wool is a traditional building insulant known for its incombustible properties. Mineral wool products for standard flat roofing applications are single or dual density rigid boards with mechanical and compression strength properties sufficient for intended application.

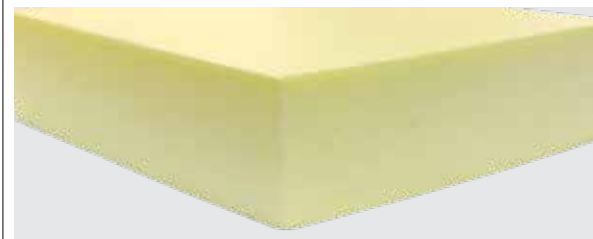


- Excellent fire resistance (to more than 1000°C), most stone wool products are classified as non-combustible
- Low thermal conductivity value of 0.038 - 0.041 W/m·K
- Compressive strength in the range of 40 to 80 kPa which is sufficient for exposed roofing applications
- Weight is in the range of 100 - 200 kg/m³

Sika Product
■ SarnaTherm®-160

XPS

XPS (Extruded Polystyrene) is a plastic styrol foam produced with extrusion process. XPS has very high compression strength and very low water absorption and these unique advantages determine its most common applications - utility decks with high loads and inverted roofs (when thermal insulation is placed above waterproofing layer).



- Almost zero water absorption
- Most XPS products are self-extinguishing in fire
- Very low thermal conductivity value of 0.028 - 0.034 W/m·K
- Very high compressive strength in the range of 250 - 700 kPa which is sufficient for utility decks with high traffic
- Lightweight in the range of 32 - 42 kg/m³

Sika Product
■ SarnaTherm® XPS

VAPOUR CONTROL LAYERS

Fasteners and fixings are crucial components, especially in mechanically fastened roof systems. Wind uplift forces and corrosion of the metal are the two most vertical influences that put tough demands on those components of a roofing system.

VAPOUR CONTROL LAYERS

A wide range of PE foils with different densities and design to cater for all common applications



- High water vapour resistance
- Cost effective solutions
- Easily attached to each other with adhesive tapes
- Suitable for all main substrates (steel, concrete, wood)
- Very low weight gives no additional load on the structure
- High flexibility at low temperatures

Sika Product

Sarnavap® 500E, Sarnavap® 1000E, Sarnavap® 2000E, Sarnavap® 3000M

ALUMINIUM SELF-ADHERED VAPOUR CONTROL LAYER

Thermal insulation boards consisting of expanded polystyrene granules. This is one of most cost efficient solutions for exposed ballasted roofing systems.



- Completely vapour tight aluminium foil
- Full bond to the substrate, ideal for adhered membrane systems
- Can be used as a temporary waterproofing layer
- Improved fire resistance due to added flame-retardant
- Easy self-adhered application
- Very low weight gives no additional load on the structure
- Suitable for all main substrates (steel deck, concrete, wood)

Sika Product

Sarnavap® 500E SA

LAMINATED METAL SHEETS

Laminated metal sheets consist of galvanized sheet metal laminated on the top side with **Sarnafil®** membrane. The lamination has the same properties and compatibility as the roofing membrane sheets. The laminated metal sheets can therefore easily be welded to the waterproofing membranes during installation.

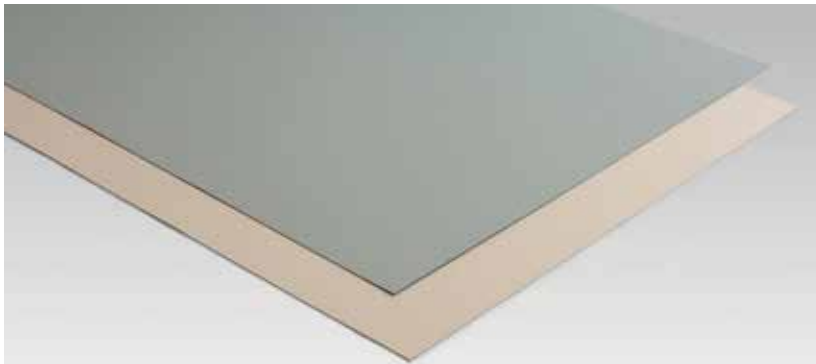
This product creates the widest range of possibilities for flashings and terminations. An extensive variety of different edge profiles can be formed out of these metal sheets.

Flashings where these profiles can be used include:

- Parapet details
- Connection to skylights
- Roof edge details
- Connections to walls

Main Advantages:

- Fully watertight connections of tailored profiles to the membranes
- Watertight compensation gaps for expansion / contraction of metal which is easily welded over with membrane pieces
- Very high resistance against corrosion due to the additional protection of PVC / FPO laminated top layer
- Edge profiles with the same uniform colour as the roof membrane



Sarnafil® Metal Sheet 2000 mm x 1000 mm

Examples of Laminated Profile Use in Different Flashings

PARAPET FLASHINGS

Profiles of laminated metal are used on the outer edge of the parapet. The profile is fastened mechanically to the structure.



- Membrane is welded on top leaving no fastener penetrations exposed
- Profiled edge prevents water going from vertical parapet surfaces into the façade
- Good aesthetics and no need for installation of additional parapet cap – cost effective, good looking solutions

ROOF EDGE FLASHINGS

As with parapet details, the profile is attached mechanically to the structure.



- All profile fastenings are covered with the waterproofing membrane securely welded to the laminated metal
- Easy to install fully watertight solutions
- The profile is made without upstand which allows the free flow of rain water into the gutter

OTHER ACCESSORIES AND ANCILLARY PRODUCTS

MEMBRANE ADHESIVES, CLEANERS AND SEAM PREPARATION AGENTS

A complete, fully compatible range of integral components to support adhered membrane installations, with reliable surface preparation and efficient execution of the welded membrane seams.



- **Sarnacol**®, and **Sikalastic**® **Coldstick**® adhesive products
- **Sarna**® cleaning products
- **Sarnafil**® **T Prep** for membrane seam preparation

ADHESIVE SEALANTS

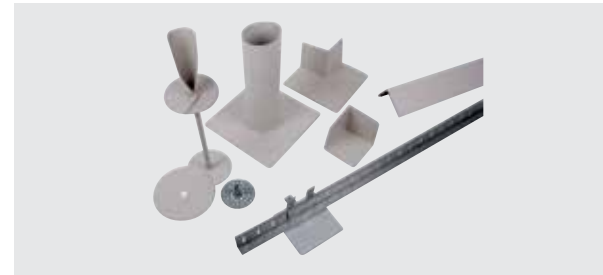
Adhesive sealants are used to waterproof the terminations of roofing membranes at edge flashings and different types of penetrations or junctions with other materials.



- **Sikaflex**® **11 FC+**

PREFABRICATED PARTS, PIECES AND SECTIONS

Sika produces a wide range of different prefabricated pieces and sections used to allow easier membrane application and installation on different details in the waterproofing system.



- Prefabricated Corners
- Pipe and post flashings
- Lightning conductors and connections
- Gravel ballast stopends

DRAINAGE PRODUCTS

A large variety of different drains, scuppers, overflows which are fully compatible with the Sika roofing membranes.



- Drains (single and sets)
- Leafguards
- Scuppers
- Overflows

WALKWAYS

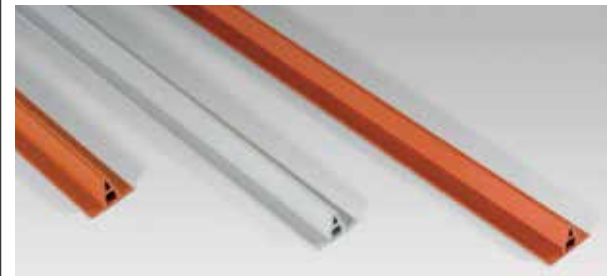
These are used in exposed roofing systems to provide pedestrian access – mainly for equipment another maintenance purposes.



- Walkway pads **Sarnafil® PVC**
- Walkway pads **Sarnafil® T**

DECOR PROFILES

Decor profiles are used to imitate metal standing seam roofs. They are available in many different colours and in both Sika PVC and FPO membrane products.



- **Sarnafil® G/S Decor Profile**
- **Sarnafil® T Decor Profile**

PROTECTION AND SEPARATION LAYERS

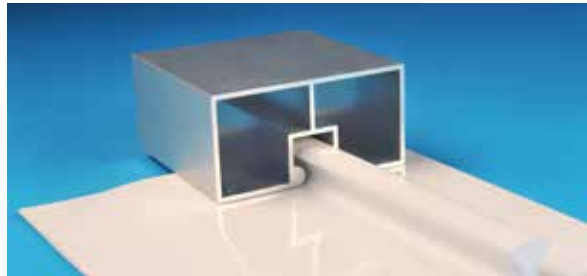
Separation layers are placed between non-compatible components in the roof build up. Protection layers are used to protect the waterproofing membrane from different kinds of damage.



■ Protection and separation layer felts

PREFABRICATED UNIVERSAL ROOF MOUNTING FACILITIES

SikaRoof® Base PVC is welded to the roofing membrane. Main usage is the fixing for air-condition units, cable, pipe tracks, pumps, etc to the roof without penetrating the roofing membrane.



■ SikaRoof® Base PVC

PREFABRICATED UNIVERSAL ROOF CONNECTION POINT

SikaRoof® Anchor-W PVC system is a factory made preformed accessory for watertight penetration of the waterproofing membrane. It provides a secure connection directly between substructure below the waterproofing membrane.



■ SikaRoof® Anchor-W PVC

PROJECT REFERENCES Sarnafil® - MALAYSIA

East Malaysia

- KPJ Miri Specialist Hospital, Bandar Baru Permayajaya, Miri City, Sarawak
- Petronas Menara LNG, Miri, Sarawak
- Telekom Malaysia, Jalan Bukit Mata Kuching, Kuching, Sarawak
- New Plant for CMS Clinker Mambong, Kuching, Sarawak
- Petronas LNG Sub Station 7, Bintulu, Sarawak
- Bank Negara Malaysia, Jalan Chong Thain Vun, Kota Kinabalu, Sabah
- Aeropod Train Stesen, Tanjung Aru, Sabah
- Boulevard Service Apartment, Kuching, Sarawak
- D'Banyan Residennial Projects Re-roofing, Kota Kinabalu, Sabah
- Petronas LNG Train 9 Reroofing, Bintulu, Sarawak
- Sabah Forest Industry Reroofing, Jalan Jeti, Kota Kinabalu, Sabah
- Sarawak Specialist Hospital and International Medical Center, Kuching, Sarawak

Southern

- Ikano Toppen Shopping Centre, Tebrau City, Johor Bahru
- Novugen Pharma, Bandar Baru Enstek, Daerah Seremban, Negeri Sembilan
- Johor Premium Outlet Reroofing, Jalan Premium Outlets Indahpura, 81000 Kulai, Johor Bahru
- Masjid Sri Sendayan Roof Top, Bandar Sri Sendayan, Seremban
- Aeon Tebrau City Shopping Mall Reroofing, Tebrau City, Johor Bahru
- Lee Soon Seng Plastic Industries Factory, Kulai, Johor Bahru
- Pusat Latihan Teknologi Tinggi Adtec Academic Melaka, Melaka
- Ikea Store Tebrau City, Johor bahru
- Sunpower Admin Building, Alor Gajah, Melaka
- Mahkota Parade Shopping Mall Reroofing, Melaka
- POS Office Malaysia Reroofing, Kluang, Johor Bahru
- POS Office Malaysia Reroofing, Pontian, Johor Bahru
- POS Office Malaysia Reroofing, Mersing, Johor Bahru
- Affin Bank Building, Kluang, Johor Bahru
- POS Office Reroofing Malaysia, Johor Bahru
- Tanjung Langsung Port, Pasir Gudang, Johor Bahru
- Green Roof 4 Blok of Services Apartment (1210 Units), Jalan Austin Perdana Utama, Taman Austin Perdana, Johor bahru
- University Sains Islam Malaysia (USIM) Convention Center, Nilai
- Sunpower Production Building, Alor Gajah, Malacca

Southern

- Tunku Jaafar Hospital Reroofing, Jalan Rash, Seremban, Negeri Sembilan
- Elita Condominium, Jalan Permas Jaya, Johor Bahru
- JST Factory, PTP, Johor Bahru
- University Sains Islam Malaysia (USIM) Convention Center, Nilai, Negeri Sembilan
- POS Office Besar Reroofing, Jalan Dato Bandar Tunggal, Seremban, Negeri Sembilan
- Open University Malaysia (OUM), Johor Bahru
- Panasonic Production Plant, Pasir Gudang, Johor
- Extension Senai International Airport, Johor Bahru
- Mahkota Parade Shopping Mall Reroofing, Melaka
- Sika Kimia Liquid Plant, Senai, Johor Bahru
- Johor State New Administrative Centre (JSNAC), Johor Bahru
- Mercedes Showroom, Jalan Skudai, Johor Bahru, Johor
- C.P Group Reroofing, Kawan Perindustrian Tanjung, Pasir Gudang, Johor Bahru

Northern

- Tunku Abdul Rahman University College, Kampar, Negeri Perak
- Ikea Store Batu Kawan, Pulau Pinang
- Menara Japan Lifeline Factory (JLL), North Penang Science Park, Pulau Pinang
- Osram Opto Factory Phase 2 new Extension, Kulim, Pulau Pinang
- Landmark Central Shopping Mall Reroofing, Kulim, Pulau Pinang
- Paramit Factory Malaysia Phase 2, Bayan Lepas Free Industrial Zone, Pulau Pinang
- Osram Opto Factory, Kulim, Pulau Pinang
- Majlis Perbandaran Seberang Perai -Ibu Pejabat Reroofing, Pulau Pinang
- B-Braun Medical Centre @ Bayan Lepas, Industries Zone, Pulau Pinang
- Penang Internation Aiport - Phase 2 Reroofing, Pulau Pinang
- Albukhary University Alor Setar, Kedah-Phase 2 Reroofing, Pulau Pinang
- Penang Dewan Undangan Negeri Reroofing, Pulau Pinang
- Penang Labour High Court Reroofing, Pulau Pinang
- UUM Sintok, Kedah, Pulau Pinang
- Kulim Hi Tech Park, HQ, Kulim, Pulau Pinang
- Penang Internation Airport, Phase 1 Reroofing, Pulau Pinang
- Infineon Technologies Phase 2, Kulim, Pulau Pinang
- Albukhary University Alor Setar, Kedah, Pulau Pinang
- The Jelutong Sewage Treatment Plant, Pulau Pinang
- Tesco Cold Storage Distribution Center, Ipoh, Perak

East Coast

- POS Office Malaysia Reroofing, Kelantan
- Istana Palace, Jalan Sultan, Bandar Kota Bharu, Kelantan
- Istana Chedering, Kuala Terengganu, Terengganu
- Pos Office Besar Reroofing, Kuantan, Pahang Darul Makmur



Ikano Power Centre (IPC) Shopping Mall Reroofing, Mutiara Damansara, Selangor



Aeropod Train Stesen, Tanjung Aru, Sabah



Putrajaya International Convention Centre (PICC), Putrajaya, Selangor

Klang Valley

- Bangsar CarPark Roof, Jalan Ara Bangsar, Bangsar, Kuala Lumpur
- Hilton Boost Hotel, I City, Shah Alam, Selangor
- 633 Residency, Jalan Tebing, Brickfields, Kuala Lumpur.
- IOI Resort City Mall, Putrajaya, Selangor
- Sungai Langat Water Treatment Plant Reroofing, Cheras 9 Miles, Selangor
- Putrajaya International Convention Centre (PICC), Putrajaya, Selangor
- KLIA Carpark Roof Top Re-waterproofing Works, Sepang, Selangor
- Quarza Shopping Mall, Jalan Melati Kuarza 2, Sunway Montona (U/C), Kuala Lumpur
- The Edge of U Thant, Jalan Penggawa, Taman U Thant, Kuala Lumpur.
- SUK Selangor, State Government Office, Persiaran Sultan, Seksyen 5, Shah Alam, Selangor.
- CCM Duopharma Biotech, Jalan Seruling 59, Taman Klang Jaya, Selangor.
- The Grand Hyatt Hotel Reroofing, Kuala Lumpur
- Kelana Centre Point, Jalan SS 7/19, SS 7, 47301 Petaling Jaya, Selangor
- Menara LGB, Jalan Wan Kadir, Taman Tun Dr Ismail, 60000 Kuala Lumpur
- Zenopy Residences, Jalan LP 8/7, Lestari Perdana, 43300 Seri Kembangan, Selangor
- Bayan Residences (Phase 2), Tropicana Aman, Kota Kumuning, Selangor
- Menara Ikhlas Persiaran Perdana Presint 3, Putrajaya, Selangor
- Duapharma Factory @ Jalan Seruling 59, Klang, Selangor
- Ikano Power Centre (IPC) Shopping Mall Reroofing, Mutiara Damansara, Selangor
- Duopharma Factory, Jalan Seruling 59, Klang, Selangor
- H20 Ara Damansara Mix Development, Petaling Jaya, Selangor
- Spring Ville Residence Equine Park Reroofing, Bandar Putra Permai, Seri Kembangan, Selangor
- YTL Condominium, Jalan U- Thant, Kuala Lumpur
- Hotel Stripes Kuala Lumpur, Jalan Kamunting, Chow Kit, Kuala Lumpur
- Kuen Cheng High School, Jalan Syed Putra, Bukit Seputeh, Kuala Lumpur
- Pejabat Pendidikan Daerah, Petaling Utama Reroofing, Kompleks Kelana Jaya Centre Point, Selangor
- IOI City Shopping Mall, Putrajaya, Selangor
- Rapid KL New Bus Depot Prasarana Car Park Roof, Batu Caves, Gombak, Kuala Lumpur
- Rapid KL New Bus Depot Prasarana Car Park Roof, Balakong, Cheras, Selangor
- KLIA Mosque Reroofing, Sultan Abdul Samad, Kuala Lumpur
- Suria Residence Block A + Block B, Bukit Jelutong, Shah Alam Selangor
- Arkid Negara Malaysia Memorial Tun Hussein Onn, Jalan Tuanku Abdul Halim, Jalan Duta, Kuala Lumpur

- MHE-Damag Logistics Malaysia Factory Reroofing, Kawasan Perindustrian, Shah Alam, Selangor
- Sime Darby Medical Centre South Tower Reroofing, Subang Jaya, Selangor
- Islamic Art Museum Reroofing, Jalan Lembah Perdana, Kuala Lumpur
- Jakes Shopping Mall Reroofing, Jalan Munshi Abdullah, Kuala Lumpur
- KL Eco City Mix Development, Bangsar, Petaling Jaya, Selangor
- Sime Darby Plantation Tower Reroofing, Ara Damansara, Petaling Jaya, Selangor
- Ikea Cheras Store, Jalan Cochrane, Cheras, Kuala Lumpur
- Malaysia International Trade and Exhibition Centre (MITEC), Jalan Dutamas 2, Kuala Lumpur
- Kuala Lumpur Performing Art Centre (KLPAAC), Sentul West, Kuala Lumpur
- IKA works Asia Factory, Jalan Industrial 3/4, Rawang Integrated Industrial Park, Rawang, Selangor
- POS Office Malaysia Reroofing, Shah Alam, Selangor
- JKG Tower, Jalan Raja Laut, Kuala Lumpur
- Mix Development DPulze Shopping Mall, Cyberjaya, Selangor
- Menara Lien Hoe Office Block Reroofing, Tropicana Damansara, Petaling Jaya, Selangor
- Richmond Condominium, Kiara 3 Mont Kiara, Kuala Lumpur
- Sunway Nexis Business Centre, Jalan PJU 5/1, Kota Damansara, Selangor
- Pandanmas Residence Jln1/76C, Desa Pandan, Mukim Ampang, Kuala Lumpur
- Quill City Shopping Mall, Jalan Sultan Ismail, Kuala Lumpur
- POS Office Reroofing, Jalan Pudu, Kuala Lumpur
- CBN Group Reroofing, Bukit Jelutong, Shah Alam, Selangor
- Icon Residences, Mont Kiara, Kuala Lumpur
- Tropicana City Shopping Mall, Damansara
- POS Office Reroofing, Old Klang Road, Selangor
- ABASS Water Treatment Plant Reroofing, Putrajaya, Selangor
- UMW Toyota HQ Reroofing, Section 15, Shah Alam, Selangor
- Central Bolts and Nuts Factory, Bukit Jelutong, Jalan Batu Tiga, Shah Alam, Selangor
- MLH Logistics Factory Reroofing, Jalan Subang 1, Subang Jaya, Selangor
- POS Office Reroofing, Jalan Pudu, Kuala Lumpur
- Axis Infinite Center Office and Warehouse Reroofing, Petaling Jaya, Selangor
- Leon Huat Factory and Office reroofing, Bukit Raja, Shah Alam, Selangor
- Menara Complex Dayabumi Reroofing, Jalan Sultan Hishamuddin, City Centre, Kuala Lumpur.
- Wangsawalk Shopping Center Reroofing, Wangsa Maju, Kuala Lumpur
- Telekom Malaysia Reroofing, Port Klang, Selangor
- E Curve Cineplex Shopping Centre - Extension Building, Mutiara Damansara, Selangor

- Cooling Plant, Cyberjaya, Selangor
- Canon Opto, Hicom Industrial Estate, Shah Alam Reroofing, Selangor
- Saxonnia (Malaysia) Factory, Jalan Seruling 57, Klang, Selangor
- Ibu Pejabat JPJ Government Reroofing, Cyberjaya, Selangor
- FFM Bakery Factory (The Italian Baker - MASSIMO), Pulau Indah, Klang, Selangor
- Double Tree by Hilton Hotel Kuala Lumpur Reroofing, The Intermark, Jalan Tun Razak, Kuala Lumpur
- Digi Tele-communication Data Center, Shah Alam, Selangor
- Tropicana City Shopping Mall, Jalan SS 20/27, Damansara Jaya, Selangor
- Subang Abdul Aziz Shah Terminal One Airport - Spirit Aerosystems, Lapangan Terbang Sultan Abdul Aziz Shah, Subang, Selangor
- Astaka Hockey Stadium and Sport Complex Reroofing, Petaling Jaya, Selangor.

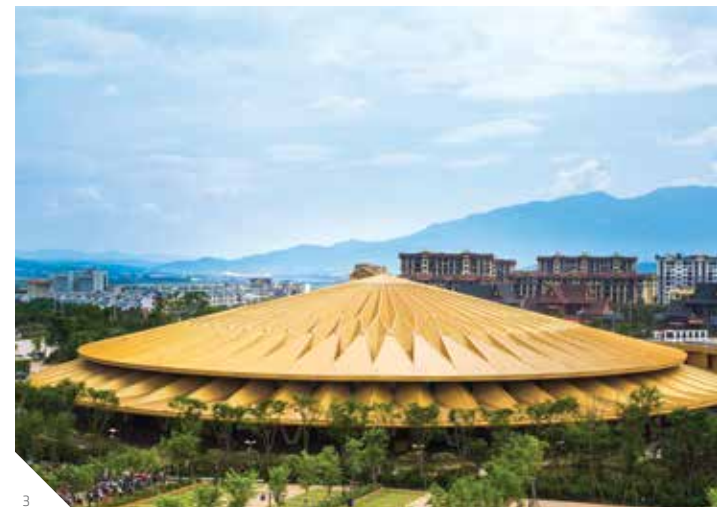


JST Factory, PTP, Johor Bahru



Mahkota Parade Shopping Mall Reroofing, Melaka

PROJECT REFERENCES Sarnafil®-INTERNATIONAL





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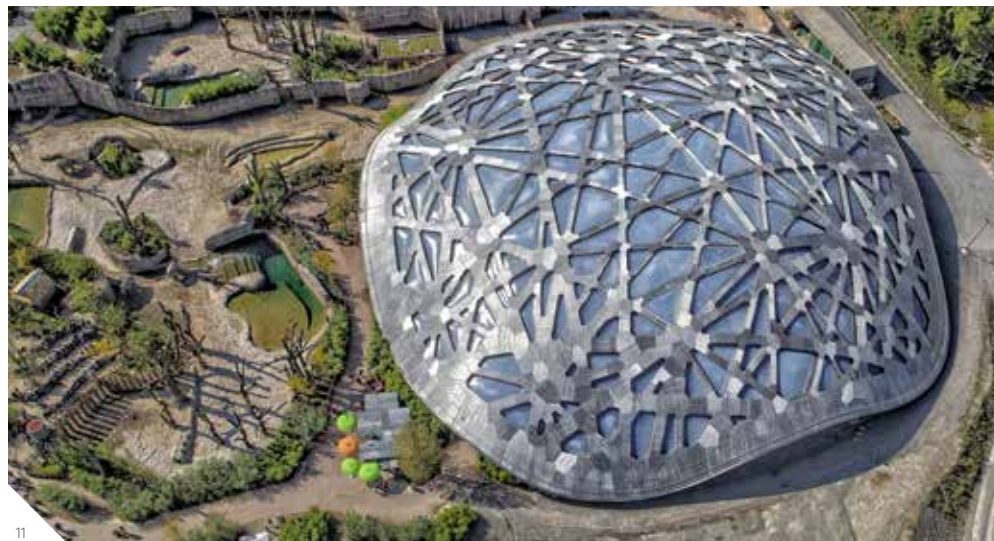
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1. GF Victoria Hotel, Tenerife, Spain
2. Satellitenterminal Munich, Germany
3. Dai Show Theatre, China
4. Hotel Bahia Mar, US
5. V&A Museum, Dundee, Scotland
6. Chichago City Hall, Illinois, USA
7. Residential Buildings Riedgraben, Zurich, Switzerland
8. Elbphilharmonie in Hamburg, Germany
9. Ballycotton Private House, Cork, Ireland
10. Rome High School, US
11. The Kaeng Krachan Elephant House, Zurich
12. Victorian Desalination Plant, Australia

SIKA FULL RANGE SOLUTIONS FOR CONSTRUCTION:



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