ROOFING
WORLD CLASS ROOFING WITH Sarnafil®

BUILDING TRUST

COMPANY INTRODUCTION

Sika Sarnafil was created in 2005 by the merger of two world leaders in waterproofing. Sarnafil is now part of the publicly listed Sika Group in Switzerland, creating the largest high-polymeric membrane supplier in the world. Sika Sarnafil has over 350 million square metres installed worldwide and is a recognized leader in protecting roofs from weathering effects and other problems associated with water ingress and moisture penetration. Today, these world class roofing systems are available in New Zealand.

DEPENDABILITY

Only an absolutely watertight flat roof can be considered a good flat roof. Sika Sarnafil has nearly 50 years experience in the production and use of thermoplastic waterproofing membranes and systems. In addition, Sika Sarnafil guarantees an above average life expectancy and functionality.

ECOLOGY

Modern plastics engineering is environmentally conscious. As a result, a majority of Sika Sarnafil products are recyclable. Eco-friendly production is also an integral part of Sika Sarnafil's environmental management and a particular focus of company policy.

INNOVATION

The latest polymer blends form the basis for Sika Sarnafil's numerous developments and the resulting Sika Sarnafil waterproofing membranes are proven and tested thousands of times over, throughout the world. When combined with modern fastening technology, full adhesion or ballasting, they offer an extremely high standard of reliability. This level of reliability allows for a wide range of design options and tailor-made solutions.

PARTNERSHIP

'Understanding customer needs' is not just a catch-phrase at Sika Sarnafil. A customer-focused culture is underscored by a strong commitment to meeting the customer's local needs through our worldwide network of subsidiaries. Sika Sarnafil has production sites in Europe, North America and Asia, and distribution companies throughout the world.

Sika Sarnafil regards itself as a service company. This means that specialists will provide assistance on each project: from the planning phase through to project completion.


Innovation


Partnership


Ecology


Reliability

PRODUCT PROPERTIES

General Product Features

- Approximately 50 years' application experience under various climates
- Aging-resistance properties proven by projects and artificial weathering tests
- Minimum 20 years life expectancy for exposed applications and 50 years life expectancy for unexposed applications
- Low temperature flexibility, no cracks at -30°C
- Root resistant, suitable for roof gardens
- High puncture resistance and high mechanical resistance
- Low shrinkage rate
- Homogeneous material, no delamination, no capillary effects
- Chemical resistance, resistant to alkali water from concrete
- Good fire resistance
- 2.00m wide, minimum material waste during installation
- Seams are sealed through hot air welding
- Good moldability, easily adaptable to complicated flashings and corners
- Easy maintenance with low cost

SPECIAL PROPERTIES AND APPLICATION

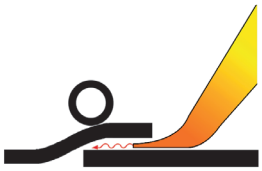
S327 Membrane

- UV-resistant, polyester scrim reinforced membrane with lacquer coating to resist staining from airborne dirt and pollutants
- High tensile strength and excellent mechanical properties
- Suitable for mechanically fastened Exposed Roof System

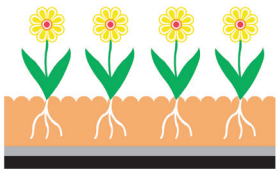
G410 Membrane

- UV-resistant, fibreglass reinforced membrane with lacquer coating to resist staining from airborne dirt and pollutants
- Good dimensional stability and high elongation at break
- Suitable for fully adhered Exposed Roof System
- Root resistant and good elongation at break
- Suitable for loosely laid Protected Roof System, particularly roof gardens

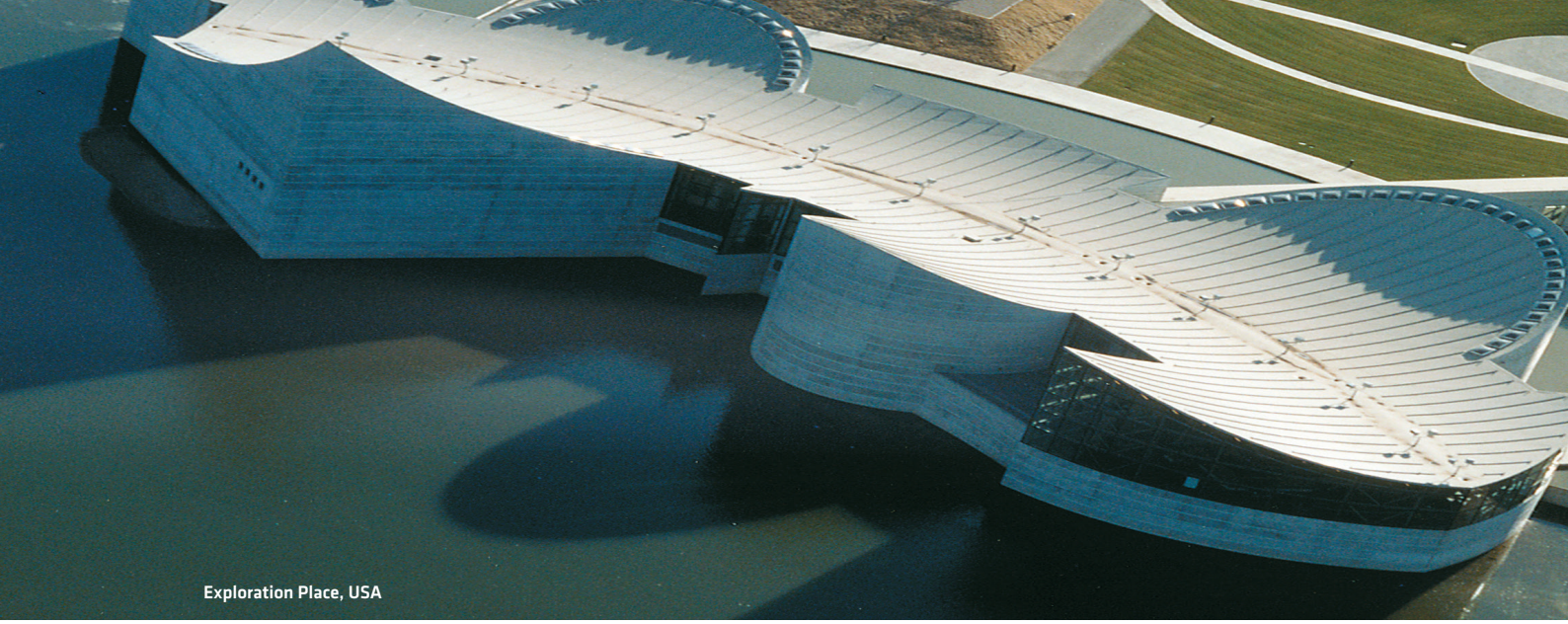
Project Proven for Decades



Hot Air Welding



Root Resistance



Exploration Place, USA

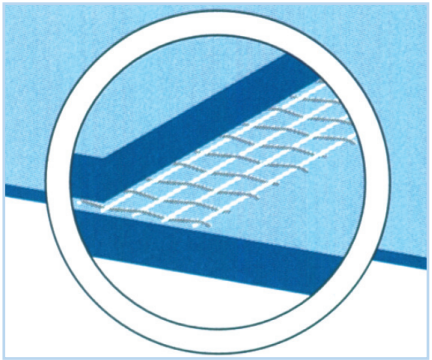
TECHNICAL DATA

PVC waterproofing membrane produced by Sika Sarnafil refers to international and domestic standards for various technical properties. Advanced product formulation, modern production equipment and strict production management result in excellent product properties.

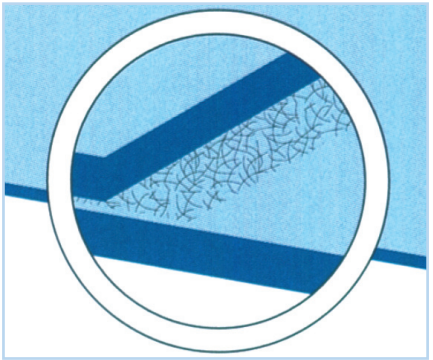
Physical Properties of Selected Membranes

Item	S327-20L	G410-20L
Tensile Strength	1,100 N/50mm	10 N/mm²
Elongation at Break (%)	10	180
Dimension Stability (%)	1.0	0.2
Low Temperature Flexibility (°C)	-25°C	-25°C
Water Tightness	meet req.	meet req.
Puncture Resistance	meet req.	meet req.
Heat Aging Treatment	meet req.	meet req.
Chemical Corrosion Resistance	meet req.	meet req.
Artificial Weathering	meet req.	meet req.

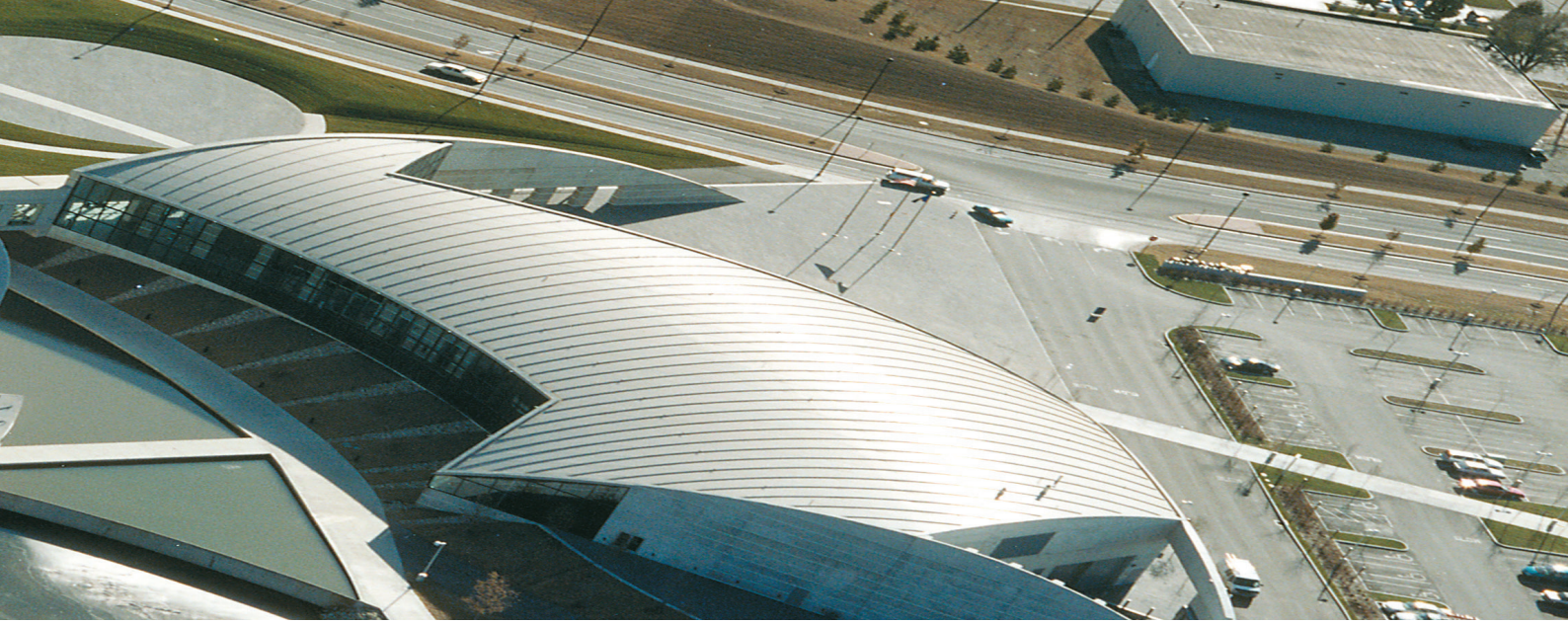
Testing Standard: DIN (German Industrial Standard) unless otherwise indicated.



Sarnafil S Membrane (Polyester Reinforced)



Sarnafil G Membrane (Fibreglass Reinforced)



APPLICATION FIELDS

Sika Sarnafil PVC membrane is produced to an advanced formulation. The life expectancy of the whole roofing waterproofing system is over 20 years, far exceeding that of normal PVC waterproofing systems. This outstanding advantage means Sika Sarnafil products are widely used in various waterproofing fields.

- Exposed Roof
- Roof Garden
- Utility Deck
- Pedestrian Roof
- Traffic Roof
- Lightweight Roof
- Roof Renovation

LIFE EXPECTANCY

The life expectancy of a roof system is the single most important factor in the overall life cycle cost.

Sika Sarnafil roofs have passed the ultimate test - the test of time. Sika Sarnafil has numerous projects over 30 years old that are still performing today.

With exposed roof systems still watertight after 30+ years, Sika Sarnafil has developed a world class reputation for performance, unequalled in the roofing industry.

More than 350 million square metres of Sika Sarnafil membrane protects some of the world's most valuable structures.

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

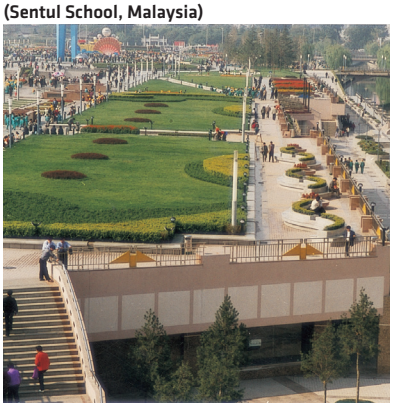
In the assessment of Sarnafil the BBA (British Board of Agrément) states:

All available evidence indicates that the Sika Sarnafil Roof Covering System should have a life in excess of 30 years.

Exposed Roof with logo (Brooks Pharmacy, US)

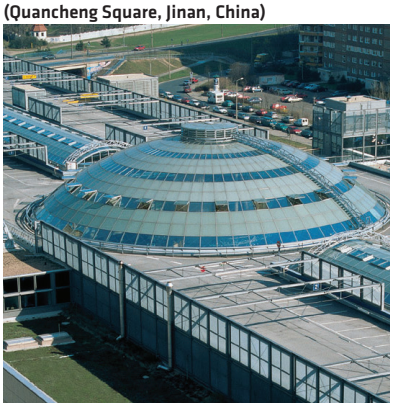
Exposed Roof (Sentul School, Malaysia)

Lightweight Roof (Nokia Plant, Beijing, China)



Roof Garden (Quancheng Square, Jinan, China)

Pedestrian Roof (Nestlé Chocolats, UK)



Traffic Roof (Allee-Center, Germany)

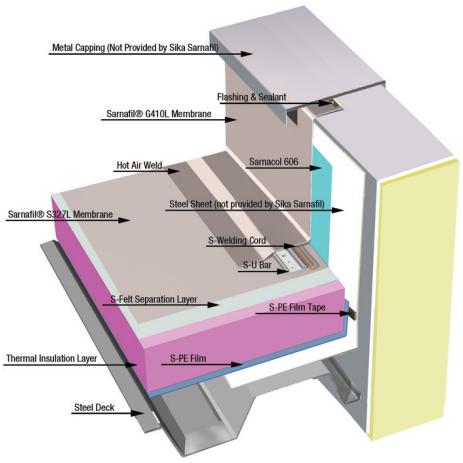
Porsche Service Centre, Germany

SYSTEM CONCEPT

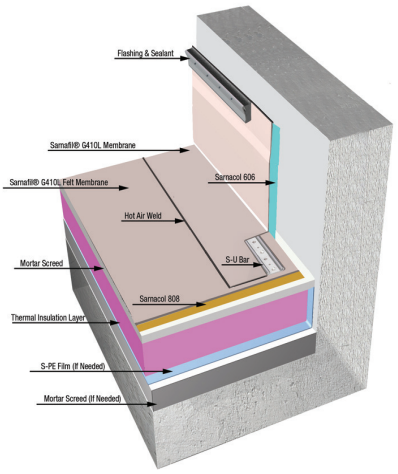
Sika Sarnafil puts much emphasis on design and integrates it into a total package of waterproofing systems. To maintain a high design quality, Sika Sarnafil employs professional designers. Under the guidance of Swiss headquarters, Sika Sarnafil develops customized waterproofing system solutions for numerous roofing applications. The roof garden and lightweight roofing system offer a complete new design option for the New Zealand construction market at European standards.

Sika Sarnafil Waterproofing Systems

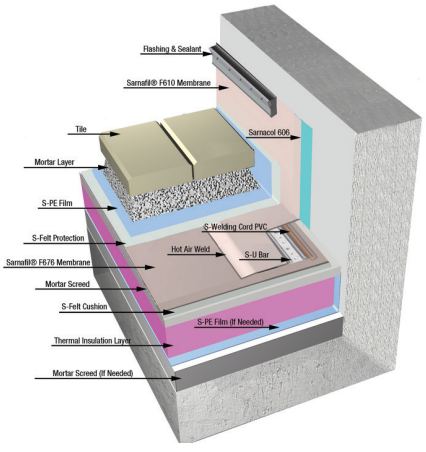
- Offer project specific design of the waterproofing system
- Provide system accessories with high quality
- Are backed by 50 years' experience
- Select proper and practical material types for different projects
- Use advanced installation tools to guarantee the reliability of the waterproofing systems
- Offers professional training and establishes work processes for the installation team to guarantee a first-class result
- Offers site support to guarantee complete implementation of waterproofing system



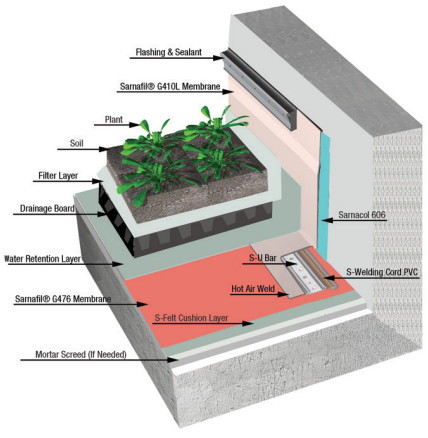
Mechanically Fastened System



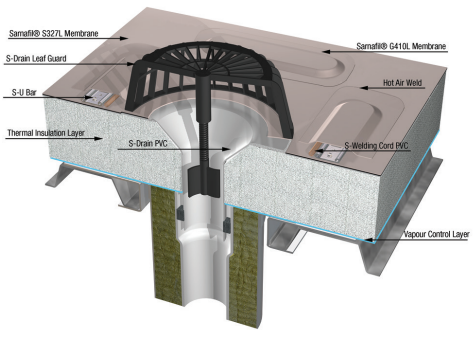
Fully Adhered System



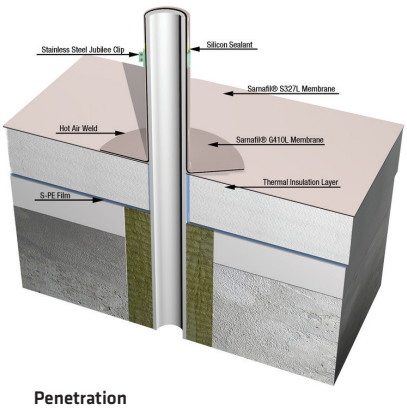
Pedestrian Roofing (Loosely Laid) System



Roof Garden (Loosely Laid) System



Roof Drain



Penetration

INSTALLATION KNOW-HOW

To benefit from all the advantages of Sika Sarnafil waterproofing systems, the use of Sika Sarnafil PVC membrane and system accessories is not enough. Installation must be by a Sika Sarnafil certified applicator, meeting Sika Sarnafil's installation requirements.

Installation features of Sika Sarnafil fully adhered system

- Special Sika Sarnafil adhesive, low consumption rate
- Excellent bond, fully reflecting the original shape of a building
- Convenient and safe installation
- Automatic welding machine available.

Installation features of Sika Sarnafil mechanically fastened system

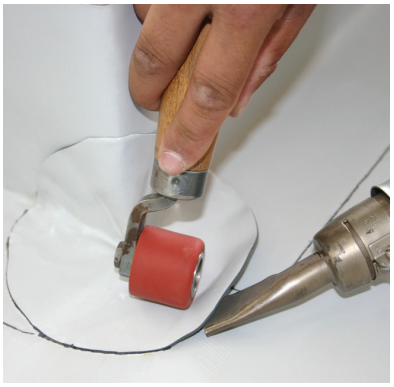
- Quick and reliable installation, little affected by the weather.
- Able to resist high wind loads, guaranteeing the security of the system.
- A range of high quality fasteners suitable for different substrates.
- Automatic welding machine available.
- Low installation and system cost.

Installation features of Sika Sarnafil loosely laid system

- Cost effective
- Quick and reliable installation, little affected by the weather
- Felt protection layers
- Widely used in protected systems, such as roof gardens, utility decks and basements

Sarnamatic 661 - Automatic welding machine

Hand welding guns and pre-fabricated parts

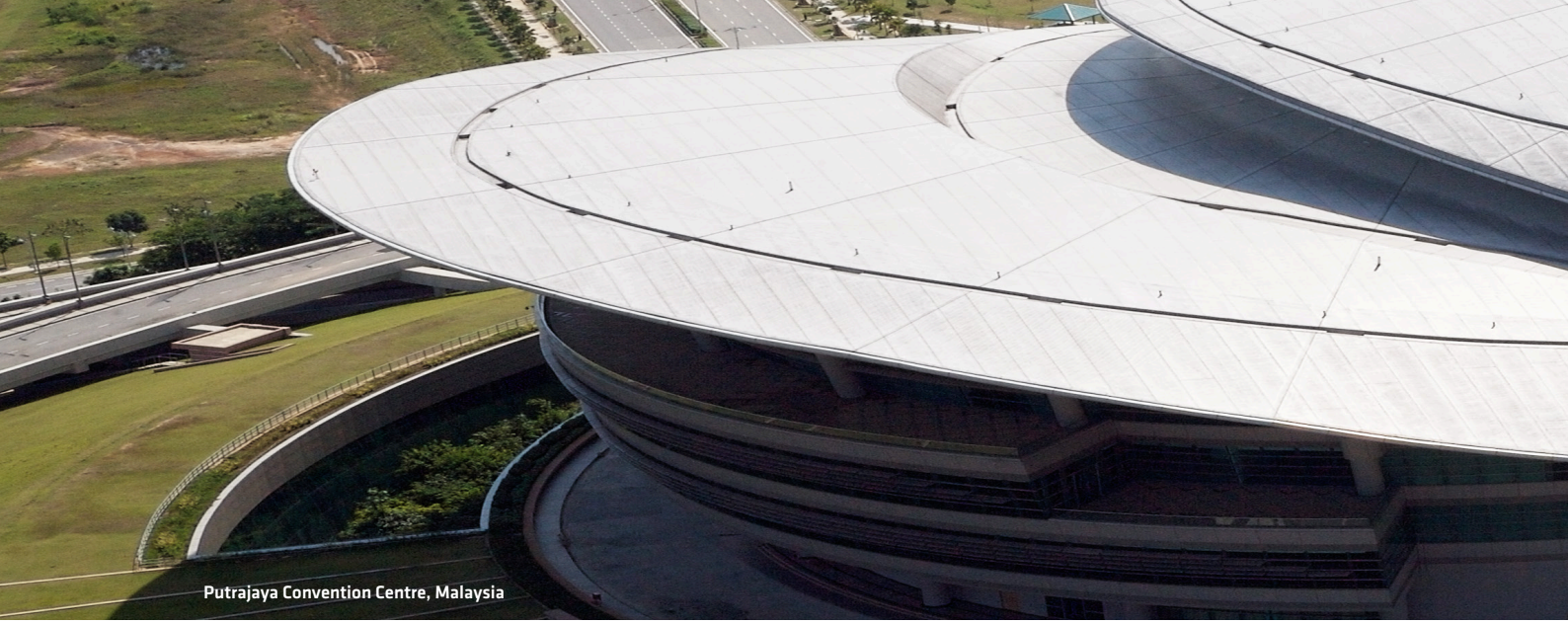


Details for the treatment of outside corners

Details for the treatment of vent pipes

Accessories

Walkway pads

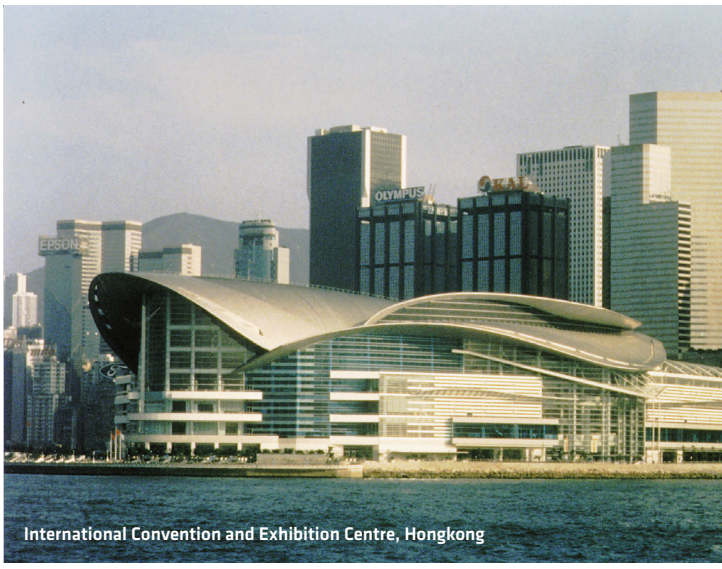


Putrajaya Convention Centre, Malaysia

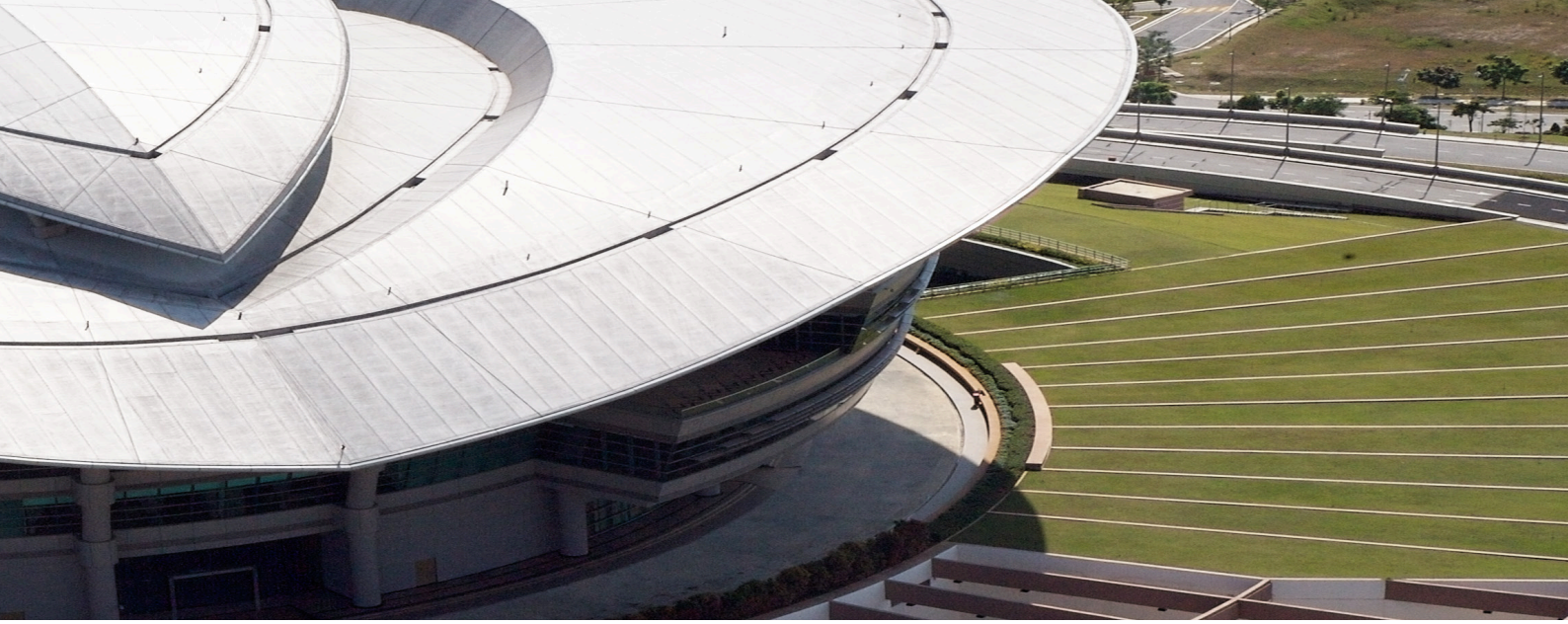
REFERENCE PROJECTS IN ASIA

1. Esplanade Theatres on the Bay, Singapore
2. Police Coast Guard Headquarters, Singapore
3. Fusionpolis, Singapore
4. Lagoon View Condominium, Singapore
5. JTC Factory at Changi North, Singapore
6. Millennia Institute, Singapore
7. Sentosa Cove, Singapore
8. Mount Elizabeth Hospital, Singapore
9. Exxon Mobil Refinery, Singapore
10. Cyber Hub Building, Singapore
11. Green Lodge Condominium, Singapore
12. Changi Terminal 3 (Planter Gutter), Singapore
13. Jurong Bird Park, Singapore
14. Putrajaya Convention Centre, Malaysia
15. Masjid Sul. Nasaruddin Shah Mosque, Malaysia
16. Sarawak International Medical Centre, Malaysia
17. Astaka Hockey Stadium, Malaysia
18. Mercedes Showroom, Malaysia
19. Suvarnabhumi Airport, Bangkok, Thailand
20. Swiss Embassy, Bangkok, Thailand
21. Egate Power Plant, Bangkok, Thailand
22. Siam Royal View, Bangkok, Thailand
23. Peruri Currency Printing Plant, Indonesia
24. Philips Factory, Indonesia
25. Sumitomo Plastics, Indonesia
26. Sanyo Electronics, Indonesia
27. Nestle, Philippines
28. Bacolod Airport, Philippines
29. Vietnam Convention Centre, Vietnam
30. French Embassy, Vietnam
31. Miho Museum, Japan
32. Hitachi Computer Company, Japan

Suvarnabhumi Airport, Bangkok, Thailand

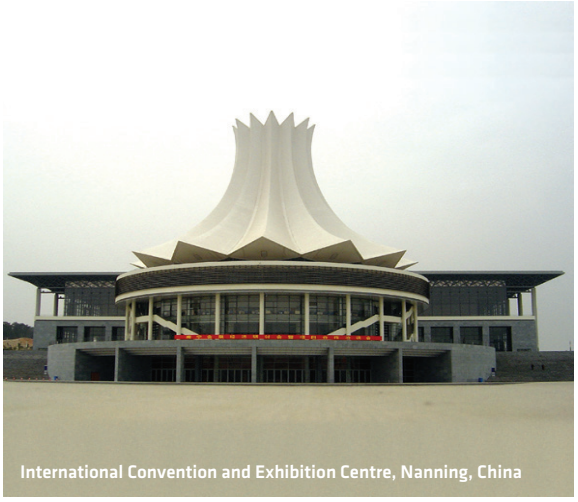


International Convention and Exhibition Centre, Hongkong



GBR Foundation Inc, Philipines

Guangzhou Honda Automobile Co. Ltd, China



International Convention and Exhibition Centre, Nanning, China

Las Vagas Sands, Macau

IWM American air Museum, Duxford, UK

REFERENCE PROJECTS IN EUROPE

1. Palexpo, Geneve, Switzerland
2. Siemens AG, Germany
3. Heathrow Airport, London, Great Britain
4. American Air Museum, Duxford, Great Britain
5. Fischer Park, Wiener Neustadt, Austria
6. Subway station Via Cilea, Milano
7. Alcatel, Autun, France
8. Sports Activity Center, Copenhagen, Denmark
9. Volvo Bulycke, Sweden
10. Royal Hospital, Bergen, Norway
11. AEG Hoofdkantoor, Brussel, Belgium
12. Shell, Rotterdam, Netherland
13. Compaq Computer, Spain
14. Uninova, Lisboa, Portugal
15. Olympics Sports Hall, Athens, Greece
16. R. Bosch, hala 080a/090, Ceske Budejovice
17. Flughafen Ferihegy, Budapest
18. Solco Pharmaceuticals, Warsaw, Poland
19. National Economics Academy, Moscow, Russia

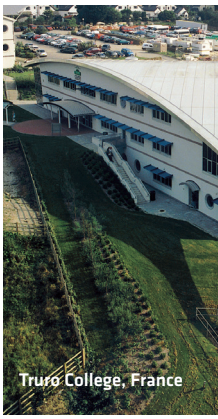
Tempodrom Centre, Germany

REFERENCE PROJECTS IN AMERICA

1. Coca Cola Bottling, USA
2. Chase Manhatten Bank, New York, USA
3. Harvard University, USA
4. Boeing Corp, USA
5. World Trade Center, Boston, USA
6. United Airlines, USA
7. Motorola Company, USA
8. Hewlett Packard, USA

REFERENCE PROJECTS IN AFRICA

1. Mitsubishi Power Plant, Cairo, Egypt
2. Underground Garage GR2, Tripoli, Libya
3. U.N.E.C.A., "New Conference Facilities", Addis Abeba, Ethiopia



Truro College, France

REFERENCE PROJECTS IN THE MIDDLE EAST

1. Accumulator Battery Plant, Iran
2. Al Khiran Coastal Development, Kuwait
3. PBC, Industrial Building, Tel Aviv, Israel
4. Royal Commission Housing, Jubail, Saudi Arabia
5. Esplanade Theatres on the Bay, Singapore
6. Police Coast Guard Headquarters, Singapore
7. Fusionpolis, Singapore
8. Lagoon View Condominium, Singapore
9. JTC Factory at Changi North, Singapore
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26. Siam Royal View, Bangkok, Thailand
27. Peruri Currency Printing Plant, Indonesia
28. Philips Factory, Indonesia
29. Sumitomo Plastics, Indonesia
30. Sanyo
31. Nestle,
32. Bacolo
33. Vietna
34. French
35. Miho M
36. Hitachi

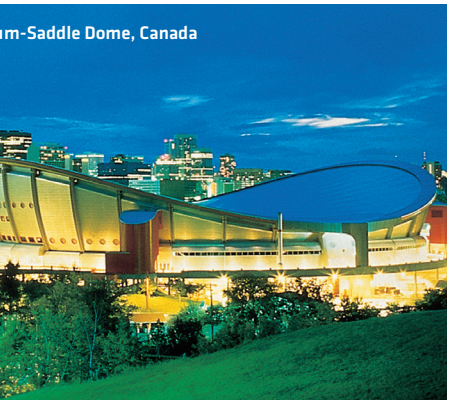
Calgary Olympic Coliseu

Staples Center, USA


Phoenix - Zeppelin Company, Czech

IMAX Cinema, Germany

Electronics, Indonesia
Philippines
d Airport, Philippines
m Convention Centre, Vietnam
Embassy, Vietnam
Museum, Japan
Computer Company, Japan


m-Saddle Dome, Canada

Salt Lake 2002, Olyimpic Oval, US


Stade Gabriel Montpied, France

FOR MORE Sarnafil® INFORMATION:

WHO WE ARE

Sika AG, 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, façades). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting loadbearing structures. 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.

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