



# Viking Torch-On Systems: enduring protection in the toughest climates

Well-established and innovative Italian supplier 'General Membrane S.P.A.', designs and manufactures world-class waterproofing membrane systems; both torch-on and self-adhered, which are proven to endure the toughest climates on the planet.

## What makes Viking's systems a cut above the rest?

Viking Roofspec has partnered with General Membrane to offer several fit-for-purpose Torch-On solutions. Specialising in modified bitumen technology, General Membrane provides Viking Roofspec with exclusive plasticised (APP), rubberised (SBS), hybrid (APAO) Anti-Root Torch-On systems and a self-adhered system requiring no flame for installation. All are designed to cope with New Zealand and the Pacific's most brutal weather conditions.

The Viking Torch-On systems identified in this brochure are installed exclusively by Viking Approved Applicators, with Viking Roofspec being the only supplier in New Zealand to provide a professional Torch-On licensing programme.

Viking membranes come with a 20-year product warranty.







#### Torch-On Membrane Systems

A Viking Torch-On system installed above the ground comprises of two layers – a base sheet that serves as the primary waterproofing layer and a cap sheet installed on top, which also provides the necessary UV protection. These layers are applied with a gas flame that melts the underside of the membrane onto the surface below. Installed on flat roofs; under floating decks and in gutters, this proven method of waterproofing has been serving the New Zealand construction sector well since the sixties.

#### Self-Adhered NO FLAME Membrane System

Health and safety of people and buildings has seen a push for flame-less application which has traditionally been dominated by fully-adhered single-ply rubber and thermoplastic membranes. But many specifiers still

prefer the reassurance of torch-on membranes with their second layer and extra thickness of material. However, some are leaning towards specifying materials that avoid the use of propane-fuelled gas torches on site. Viking's new two-layer Halley-P NO FLAME system ticks all of these boxes.

#### Ceramic Chip Finish

Viking's two-layer Torch-On systems have a ceramic chip cap sheet. This ceramic chip provides the following improvements over traditional slate mineral chip surfaces:

- stronger UV resistance
- a more robust surface
- less chip loss
- less colour fade
- an aesthetically superior and more uniform finish.

# Viking Torch-On Systems: fit for purpose solutions

# **Viking Phoenix Super APAO** (Amorphous Polyalphaolefin) Hybrid Torch-On Membrane

Like any range of products, there is a platinum system for the discerning customer. APAO Torch-On membranes; also known as 'hybrid' membranes, have been designed for roofs, under floating decks and in gutters, demonstrating similar credentials to a robust APP membrane alongside the cold-flexibility qualities of an SBS one.

This results in a high-quality; system that can be used in any climate that will last longer than most other systems. The hybrid system stocked in New Zealand and marketed exclusively by Viking Roofspec, is called 'Viking Phoenix Super APAO'.

(The Phoenix Super cap sheet is compatible and therefore warranted for installation with the following base sheets: Galaxy APAO; Isolink vented; and Termostar self-adhered.)

## **Viking Gemini APP** (Atactic Polypropylene) Torch-On Membrane

APP membrane systems represent a significant share of Torch-On membranes used in the market. Made from 'plasticised' bitumen, these robust two-layer membranes are used for roofs and under floating decks and in gutters in New Zealand's North Island excluding the volcanic plateau.

APP membranes have a high melt point when in contact with a flame and boast some of the highest-puncture resistance credentials in the market. The APP system stocked in New Zealand and marketed exclusively by Viking Roofspec is called 'Viking Gemini APP.'

(The Gemini APP cap sheet is compatible and therefore warranted for installation with the following base sheets: Galaxy APAO; Isolink vented; and Termostar self-adhered.)

## **Viking Lybra SBS** (Styrene Butadiene Styrene) Torch-On Membrane

SBS membrane systems are designed for geographic locations that experience climatic extremes. Made from 'rubberised' bitumen, this two layered membrane type is used for roofs, under floating decks and in gutters mostly in New Zealand's South Island and the North Island volcanic plateau.



SBS membranes have a lower melt point and high cold-flexibility credentials allowing them to be exposed to lower temperatures without fracturing. The SBS system stocked in New Zealand and marketed exclusively by Viking Roofspec is called 'Viking Lybra SBS'.

(The Lybra SBS cap sheet is compatible and therefore warranted for installation with the following base sheets: Galaxy APAO; Isolink vented; and Termostar self-adhered.)

## **Viking Roof Garden Anti-Root**Torch-On Membrane

Anti-Root membranes are used in roof garden projects to perform the important role of coercing plant and tree roots to turn away before membrane penetration. This is achieved through their inherent specialised chemical treatment. These membranes also possess high latitudinal strength to forgive structural movement of a building. The Anti-Root system marketed exclusively by Viking Roofspec is called 'Viking Garden FLL Anti-Root'

(Although compatible with other base sheets, it is Viking's recommendation that two layers of Anti root are installed.).

#### Viking Halley-P NO FLAME

Halley-P NO FLAME is a self-adhered Torch-On system employing a special adhesive and resins mixture that allows for excellent flame-free application. It comes with a grey or black ceramic chip cap sheet and it possesses a cold flexibility quotient of -25 °C.

This system, stocked in New Zealand and marketed exclusively by Viking RoofSpec is called 'Viking Halley-P NO FLAME'.

(NB: Halley-P NO FLAME cap sheet is to be installed with the Halley P NO FLAME base sheet only, otherwise its warranty will not be valid)

### The Keys to Success with Torch-On Membranes in New Zealand

#### **Quality Assurance**

Viking Phoenix Super APAO, Viking Gemini APP, Lybra SBS, Roof Garden FLL Anti-Root and Halley-P NO FLAME, all come with robust 20-year product warranties backed by the Tiri Group (www.tiri.co.nz)

#### Viking's Full System Warranty

Projects that represent 'absolute risk minimisation' in design, may be eligible for Viking's comprehensive Full System Warranty (also backed by Tiri Group), which covers both the materials and the approved applicator's installation in one document for 20-years (conditions apply – for more information on Viking's Full System Warranty, visit: www.vikingroofspec.co.nz).





## Alignment with an Innovative and World-class Manufacturer

General Membrane S.P.A has been manufacturing quality materials for international construction markets for decades. With innovation at the forefront of its mind, General Membrane S.P.A has a policy of re-investing a lot of its earnings back into Research and Development and testing its products in some of the world's most sophisticated laboratories.

General Membrane S.P.A only engages with distribution partners who have an emphasis on training and supply of accredited systems.

#### Viking Roofspec's Proven Record

A combination of:

- Over 50 years experience successfully supplying roofing, decking and below ground materials to New Zealand and the Pacific Islands
- alignment to a select network of licensed and approved applicators
- installing only world-class membrane systems that have been certified and appraised by nationally and/or internationally recognised product accreditation bodies

## Quality of Installation - Viking's Licensing Programme

To ensure a professional and watertight finish, only Viking Approved Applicators have access to the Viking materials featured in this brochure. Their licensed installers have been trained in the application of two-layer Torch-On membranes.

Viking Roofspec provides a professional licensing programme designed to ensure a professional standard of installation. This three-stage course includes a full curriculum with both practical application and an all-important theoretical component on the principles of waterproofing.

No installer can apply Viking's systems unless he or she has been licensed. This policy has been instrumental in Viking having one of, if not the lowest, remedial rate in the industry.

#### **Product Assurance**

Certain areas of New Zealand can be subjected to some of the toughest climatic conditions in the civilised world. This calls for construction materials to stand the test of time. At Viking Roofspec we offer quality assurance from CodeMark certifications and BRANZ appraisals, two of the highest possible forms of product assurance.

#### CodeMark

Product Certification is the highest form of product assurance in the New Zealand, Australia and Pacific Islands construction sectors. CodeMark provides a rigorous platform for construction products to be tested against compliance with building code requirements.

Viking Gemini APP Lybra SBS, and Phoenix Super APAO Torch-On membrane systems are CodeMark certified.

#### **BRANZ Appraised**

BRANZ is a nationally recognised body providing product appraisals through independent testing and verification of international lab reports for products being distributed in New Zealand. BRANZ appraises construction products to ensure they will withstand the New Zealand climate.

Viking Gemini APP, Lybra SBS and Phoenix Super APAO, are all BRANZ appraised under appraisal number 948.







# Warm and water-tight for all seasons – 'Happy Valley', Whakapapa



Selection of a fit-for-climate solution

#### **THE CHALLENGE**

Built in the 1980s, the bistro/café and ski rental buildings had serviced countless customers at Happy Valley. After 30 brutal volcanic plateau winters, weather-tightness issues were increasing and maintenance was becoming challenging and cost prohibitive.

#### THE SOLUTION

Viking Roofspec was asked to supply a warrantable solution that would create a healthy, safe and watertight environment for customers and staff and to bring the buildings up to a standard aligned with the Department of Conservation's covenants, as a world heritage listed national park.

A Viking WarmRoof System was proposed, with Viking Lybra SBS Torch-On membrane as the waterproofing component of the system. A Warm Roof was specified as it would insulate the building from the temperature extremes and a Warm Roof also moves the dew point to the outside of the roof, meaning no more condensation build-up inside.

The Viking Lybra SBS two-layer Torch-On was chosen as it has been formulated to manage extreme climates. SBS is rubberised asphalt with elastomeric properties that cope with the stresses caused by greater temperature extremes. It won't crack;

especially during the cold winter months; as it has a cold flexibility down to -15 degrees Celsius – a perfect solution for this environment.

The existing membrane was used as the vapour barrier and the rigid Kingspan polyiso insulation panels were mechanically fixed to this existing substrate to ensure it remained securely anchored to the building. The two-layer Lybra SBS membrane was then torch-applied directly on to the insulation panels. The snow rails used for point-loading, were redesigned to ensure these roofs manage the enormous amount of weight of snow during the winter.

This project was completed efficiently and effectively by one of Viking's membrane Approved Applicators. Their attention to detail ensured that the new roofing system was a vast improvement on the original roof for both weather-tightness and energy efficiency.

#### **THE RESULT**

Enthusiastic skiers could now try on equipment and enjoy a coffee in a dry and warm environment. An added bonus was that the finished roofs remained beautifully juxtaposed in the natural snowy environment – a look the Department of Conservation was steadfast about maintaining.



## BRANZ Appraised Appraisal No.948 [2017]

## Torch-On Membrane Protects Roof and Deck – Auckland

#### THE CHALLENGE

A new house was being built in a high-end residential area of auckland. The roof flowed nicely to a deck section, which provided a wonderful viewing platform for the coast. This upmarket home required a tidy, pristine finish that would be in-keeping with the neighbouring houses. The detailed design of the roof made waterproofing a challenge... And then there was the deck.

#### THE SOLUTION

Seeking a solution that would also be suited to an exposed coastal environment was another consideration. The waterproofing applicator was consulted on the project and suggested the use of Viking GM Gemini APP; a two-layer torch-on modified bitumen membrane system to meet all criteria.

All areas of the concrete and plywood substrates were primed before the Gemini APP base sheet was torchapplied. The Gemini APP cap sheet was then torched over the top of the base sheet, providing a total membrane thickness of 7mm – significant protection. Ensuring all areas of the roof were watertight was no mean feat – the difficult design meant that the membrane had to be applied to some tricky curves. Being a torch-on system, it allows the installer to manipulate and mould through the use of heat to deal with curves, contours and upstands.

Planning was also vital to ensuring the installation was watertight and an aesthetic success. The membrane was installed with the seams running at right angles to the upstands. This not only ensured the best look, it allowed for easier installation, while ensuring maximum water-tightness.

Gemini APP was also used as the waterproofing component of the deck. Seeing a floating deck would be installed on top, the Gemini APP would be torched to the deck substrate while Viking Buzon screwjack pedestals would be placed on the membrane, to support the floating structure and allow water to drain freely underneath it and away from the building.

#### **THE RESULT**

The end result was exactly what the home owners were looking for. They were conscious of how critical waterproofing is. They wanted a membrane system installed only by a licensed applicator and backed by a warranty of substance; one that had been appraised to meet New Zealand's harsh conditions. With Viking GM Gemini APP being BRANZ Appraised AND being New Zealand's first CodeMark certified torch-on system; they had the right product being applied on their house.

The roof and deck finishes were pristine and watertight. The product warranty ensured that the materials would last for the minimum of the 20 year period.



### **Viking Galaxy APAO Base sheet**

(compatible with all Viking Cap Sheets except for Halley – P NO FLAME)

DESCRIPTION	COLOUR	FINISH	THICKNESS	DIMENSIONS
Base sheet	N/A	Sand	3mm	1.0m x 10.0m

#### **Applicable Climate Zone:**

This is a traditional APAO torch-on material which can be installed anywhere in the Pacific Islands and New Zealand.



cold flexibility



flow resistance



#### **Unique Advantage:**

- resilience to temperature extremes

### Viking Termostar Self-Adhered Base sheet

(compatible with all Viking Cap Sheets except for Halley - P NO FLAME)

DESCRIPTION	COLOUR	FINISH	THICKNESS	DIMENSIONS
Base sheet	N/A	Sand (self-adhering underside)	3mm	1.0m x 10.0m

#### **Applicable Climate Zone:**

This self-adhering material can be installed anywhere in the Pacific Islands and New Zealand.







**Unique Advantage:** 

- No flame required for installation

cold flexibility

bility high temperature flow resistance

### **Viking Isolink Vented Base sheet**

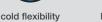
(compatible with all Viking Cap Sheets except for Halley - P NO FLAME)

DESCRIPTION	COLOUR	FINISH	THICKNESS	DIMENSIONS
Base sheet	N/A	Sand (dimpled underside)	3mm	1.05m x 7.5m

#### **Applicable Climate Zone:**

This material's dimpled nature means it can be installed anywhere in the Pacific Islands and New Zealand.







flow resistance



#### **Unique Advantage:**

- ideal for installing on recently poured concrete

### Viking Phoenix Super APAO

(compatible with all Viking Base Sheets except for Halley - P NO FLAME)

DESCRIPTION	COLOUR	FINISH	THICKNESS	DIMENSIONS
Cap Sheet	Black / Grey	Ceramic Chip	4mm	1.0m x 10m

Viking Phoenix Super APAO has a 4mm ceramic chip cap sheet which is torched-on with a propane gas-fuelled flame. It possesses all of the durability properties inherent in the Gemini APP membrane, combined with the elastomeric advantages in the Lybra SBS resulting in a premium system with the industry's largest cold flexibility quotient of -35 degrees Celsius, plus excellent UV resistance. It's a truly superior membrane that can be installed with confidence anywhere in the South Pacific.

#### **Application:**

Roofs | Decks | Parapets | Gutters



#### **Applicable Climate Zone:**

Pacific Islands, and all New Zealand Climate Zones





cold flexibility

high temperature flow resistance

#### **Benefits:**

- Thermal ageing resistance
- Form stability in hot conditions
- UV resistance
- Tensile resistance
- Ease of detailing
- High elongation properties
- Dimensional stability
- Resistance to tread
- Resistance to tearing
- · Resistance to static loading





### Viking Gemini APP

(compatible with all Viking Base Sheets except for Halley – P NO FLAME)

DESCRIPTION	COLOUR	FINISH	THICKNESS	DIMENSIONS
Cap Sheet	Black / Grey	Ceramic Chip	4mm	1.0m x 10m

Viking Gemini APP has a 4mm cap sheet which is torched-on with a propane gas-fuelled flame. Viking Gemini APP is a robust and versatile membrane system ideally suited to New Zealand's North Island (except for the volcanic plateau) and the Pacific Islands.

#### **Application:**

Roofs | Decks | Parapets | Gutters



#### **Applicable Climate Zone:**

Pacific Islands and New Zealand's North Island (except for Central N.I. volcanic plateau)







temperature flow resistance

#### **Benefits:**

- Ease of detailing
- Thermal ageing resistance
- Form stability in hot conditions
- UV resistance
- Tensile resistance
- Resistance to tread
- Dimensional stability



### Viking Lybra SBS

(compatible with all Viking Base Sheets except for Halley – P NO FLAME)

Cap Sheet	Black / Grev	Ceramic Chip	4mm	1.0m X 10m
DESCRIPTION	COLOUR	FINISH	THICKNESS	DIMENSIONS

Viking Lybra SBS has a 4mm cap sheet which is torched-on with a propane gas-fuelled flame. The elastomeric properties of Viking Lybra SBS make it a logical choice of membrane to fulfil the waterproofing requirements of buildings situated in areas subjected to climatic extremes.

#### **Application:**

Roofs | Decks | Parapets | Gutters



#### **Applicable Climate Zone:**

New Zealand's (South Island and Central North Island volcanic plateau)





cold flexibility

high temperature flow resistance

#### **Benefits:**

- Flexibility at low temperature
- Dimensional stability
- Ease of detailing
- Tensile resistance
- Thermal ageing resistance
- High elongation properties





### Viking Roof Garden FLL Anti-Root

(Recommended to be used only with another layer of the same material)

DESCRIPTION	COLOUR	FINISH	THICKNESS	DIMENSIONS
Base Sheet (2 layers)	Black / Grey	Sand	4mm	1.0m X 10m

Viking Roof Garden FLL Anti-Root membrane was developed specifically to deal with invasive roots. Aside from the chemical properties infused in the bitumen during manufacture to ensure roots don't penetrate into the building, this membrane's exceptional rot-proof polyester reinforcing mesh has been designed to avoid shrinkage and withstand extreme structural movement.

#### **Application:**

**Roof Gardens** 



#### **Applicable Climate Zone:**

Pacific Islands & all New Zealand Climate Zones





cold flexibility

high temperature flow resistance

#### **Benefits:**

- Root resistance
- Tensile resistance
- Ease of detailing
- High elongation
- · Resistance to tearing
- Dimensional stability
- Flexibility at low temperature
- Form stability in hot conditions
- Thermal ageing resistance



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## Viking Halley-P NO FLAME

DESCRIPTION	COLOUR	FINISH	THICKNESS	DIMENSIONS
Base sheet	N/A	sand	3mm	1.0m x 10.0m
Cap sheet	Black / Grey	Ceramic Chip	4mm	1.0m x 8.0m

Viking Halley-P No-Flame is a two-layered bituminous membrane system; both layers of which are self-adhering ie: do not use a gas torch for installation. This system employs a special bitumen and adhesive resin mixture that allows for excellent flame-free application. A 4mm ceramic cap sheet is installed on top of a 3mm self-adhered base sheet.

#### **Application:**

Roofs | Decks | Parapets | Gutters



#### **Applicable Climate Zone:**

Pacific Islands and all New Zealand's Climate Zones





hiah flexibility temperature flow resistance

#### **Benefits:**

- No Flame for installation
- Flexibility at low temperature
- Thermal ageing resistance
- UV resistance
- Tensile resistance
- Dimensional stability
- Resistance to tread





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