

Complies with E2 as an Alternative Solution. CodeMark 30092 and BRANZ Appraisal No. 948

Viking Torch-On Waterproofing Membrane



Product Description

Viking Torch-On roofing and deck waterproofing membrane system for roofs and decks comply with E2 as an Alternative Solution, supported by CodeMark Certification and BRANZ Appraisal.

Viking Torch-On membrane systems may be specified on new or refurbishment roofs and decks for residential or commercial projects. Directly to concrete, ply, Viking PIR insulation or StrandSarking.

Viking Torch-On are torch applied two-layer bituminous waterproofing membrane systems. The two-layers consist of a 3mm or 4mm thick Base-sheet which is torch-applied or self-adhered to a primed substrate, and a 4mm thick Black or Grey coloured ceramic-chip Cap-sheet. The Cap-sheet protects the roof system from ozone and UV degradation. A non-woven polyester / fibre-glass composite reinforced mesh within both sheet layers provides latitudinal tensile strength and high puncture resistance.

Viking's Torch-On systems offer three various modified bitumen sheet compounds providing differing properties explained under 'Viking Torch-On Types and Properties'.

Product Warranty period is 20-yrs or 25-yrs dependent on which Viking Torch-On system is specified.

For specific projects, Viking Torch-On membrane systems may be eligible for [Viking's Full System Warranty](#), which covers the product and installation warranties in one document.

Scope of Use:

Viking Torch-On Waterproofing Membranes have been assessed as roof waterproofing membranes on buildings within the following scope:

- The scope limitations of NZS 3604:2011 and NZBC Acceptable Solution E2/AS1, Paragraph 1.1; or,
- The scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area when subject to specific structural design; and,
- With substrates of plywood or suspended concrete slab
- Situated in NZS 3604:2011 Wind Zones, up to and including Extra High; and,
- With a minimum fall for roofs of 1:30 (2°), decks of 1:40 (1.5°)

Viking Torch-On Membranes have also been appraised for use as roof and deck waterproofing membranes on specifically designed buildings within the following scope:

- Subject to specific structural and weathertightness design situated in wind pressures up to a maximum design differential ultimate limit state (ULS) of 6 kPa;

- With substrates of plywood or suspended concrete slab and
- With weathertightness design of junctions for each specific structure being the responsibility of the building designer.

New Zealand Building Code (NZCB):

This system will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- Clause B1 Structure: Performance B1.3.1, B1.3.4, B1.3.4(b), B1.3.4(c), B1.3.4(d), B1.3.4(e),
- Clause B2 Durability: Performance B2.3.1, B2.3.1(b),
- Clause E2 External moisture: Performance E2.3.1, E2.3.2, E2.3.7, E2.3.7(b), E2.3.7(c)
- Clause F2 Hazardous building materials: Performance F2.3.1

NOTES

Viking Torch-On can be used for both commercial and residential buildings. It can be applied over suitably prepared existing surfaces as a re-roof solution. It is also suitable for low-slope and pitched roofs, internal gutters and parapets, balconies / decks and roof gardens. Viking Roofspec advise that all membranes (other than Dec-King) also incorporate a traffic floating deck surface on pedestals. [LINK: Refer Viking Buzon Screwjack Pedestals.](#)

Savings in power and construction costs can be made by incorporating Viking Torch-On with a Viking WarmRoof or WarmSpan solution. Refer Masterspec further in PTS.

Viking Torch-On roll sizes are the largest within the market for torch-on membranes 10m long x 1m wide. The torch application means it is a suited solution for tricky/confined roofs as the membrane can be "bled" into tight corners and awkward areas that might be difficult to detail.

Viking Torch-On Types and Properties:

Gemini APP (Atactic Polypropylene) is suited for the moderate environmental conditions in New Zealand Climate Zones 1 & 2 (North Island excluding the volcanic plateau)

Serviceable temperature range of +120°C to -10°C.

Product Warranty period 20- yrs Roll size 10mt x 1mt.

Lybra SBS (Styrene Butadiene Styrene) is suited for more extreme climates, such as New Zealand's Climate Zone 3 (South Island and North Island's volcanic plateau)

Serviceable temperature range of +100°C to -15°C.

Product Warranty period 20- yrs Roll size 10mt x 1mt.

Phoenix Super APAO (Amorphous Polyalphaolefin) possesses high durability and elastomeric properties meaning it can be installed anywhere in NZ CLIMATE ZONES and the South Pacific

Serviceable temperature range of +140°C to -35°C.

Phoenix Super APAO will last longer than average torch-on systems.

Product Warranty period 25- yrs Roll Size 10mt x 1mt.

Warranties:

Viking Torch-On systems are backed by Vikings 20-year product warranty with Certificate of Workmanship provided by Viking Approved Applicator companies.

Specific projects may be eligible for [Viking's Full System Warranty](#) (FSW), which must be applied for directly with

Viking Roofspec and is a process that warranties the full installation of product and workmanship in one document, conditions apply.

Viking Roofspec only supply Viking Torch-On to our Approved Applicator network of Viking Licensed Installers. FSW: Only Approved Applicator Companies with Installers licensed to Level 2 of Viking training may install for Viking Full System Warranty projects.

Viking Licensing / Training:

Viking Roofspec provides training and Viking licensing as recognition of the Viking Approved Applicator network. Viking Roofspec invest heavily in this area and Viking Licensing is recognised at 3 levels.

- Level 1 - all installers of Viking Torch-on are to complete Viking Stage 1 training.
- Level 2 - licensed installers have had assessments by Viking Roofspec to prove high competency of unsupervised correct installation and detailing to Viking Roofspec specification.
- Level 3 - includes installer having either an LBP or NZ Certificate in membrane roofing.

Viking Torch-On Provides:

- 6.0kPa (ULS) Wind uplift resistance – fully adhered system
- Can be incorporated with Viking WarmRoof / WarmSpan Insulated Roof Systems. Refer Masterspec.
- Vikings Torch-On systems provide NZ's widest range of modified bitumen and base sheet options with proprietary accessories
- 20-yr Viking Product Warranty for Gemini (APP) or Lybra (SBS) systems or [Viking 20-yr Full System Warranty \(conditions apply\)](#)
- 25-yr Viking Product Warranty for Phoenix Super (APAO) or Viking 20 yr Full System Warranty (conditions apply)

Supporting Evidence

The product has and can make available, the following additional evidence to support the above statements:

- Codemark Certificate GM-CM30092
- Branz Appraisal No. 948

Product Criteria

Design Requirements

Product specification and incorporation of Viking Torch-On into the building design shall be carried out by a designer/ architect/engineer or a building professional who:

- Is qualified to design the buildings covered under the 'Scope' of use of this product.
- Has ready access to the technical specifications including installation details and standards referenced in both the BRANZ Appraisal No.948 and CodeMark certificate GM-CM30092 where the design limitations are outlined for the scope of this PTS.

Viking Torch-On is supplied as a complete system with proprietary accessories to deal with secure roof terminations and proper drainage. [Click here for a comprehensive list of accessories.](#)

Installation Requirements

- Installation shall be carried out by a Viking Roofspec trained and licensed installer.
- Installation shall be undertaken in accordance with all relevant technical information related to the selected installation method, including information contained within the BRANZ Appraisal No. 948 and the Viking Roofspec Torch-On Applicator Handbook.

- Builder must refer to the correct Viking Substrate Checklist. For a list of installation requirements, please refer to the CodeMark certificate GM-CM30092.

Maintenance Requirements

- Maintenance requirements for Viking Torch-On are outlined in Viking's 'Membrane Care and Maintenance Guide'.
- In the event of damage to the membrane, the membrane must be repaired by a Viking Licensed Installer to minimum Stage 1 only who can remove the damaged portion and torch apply a patch as for new work.
- Drainage outlets must be cleared and maintained to operate effectively.

Environmental

Bitumen is a bi-product of the oil refining process. Torch-On membranes provide a constructive use of this waste product. The robust nature of a modified bitumen membrane system will ensure sustainability through longevity. A Viking Torch-On roof can be overlaid at the end of its useful life, avoiding the dumping of the old roof and the filling of landfills with inorganic waste.

Masterspec



Visit nextgen or masterspec for the online version of our specification.

4421VB: Viking Two-Layer Torch-On System

4422VS VIKING WARMSPAN where *Viking Torch-On can also be selected*

4422VW VIKING WARMROOF where *Viking Torch-On can also be selected*

Viking Substrate Checklist Plywood for Torch-On

Viking Substrate Checklist Concrete

Viking Substrate Checklist Strandsarking for Torch-On

CAD Details

Please visit our website www.vikingroofspec.co.nz or our masterspec listing for our latest CAD Roofing details.

Physical Properties

COLOURS	Ceramic Cap Sheet Colours Black or Grey
Reinforcement	Polyester non-woven reinforced with glassfibre
Compound Bitumen modified with	Gemini APP / Atactic Polypropylene Lybra SBS / Styrene Butadiene Styrene Phoenix Super APAO / Amorphous Polyalphaolefin
Surface finishing	
CAP SHEET APAO	External side: Ceramic Chip self-protection - Sand, polymeric film PE/PP, non-stick polymeric TNT (only overlap) Internal side: sand, polymeric film PE/PP, non-stick polymeric film TNT
BASE SHEET APAO	External side: sand, polymeric film PE/PP, non-stick polymeric TNT Internal side: sand, polymeric film PE/PP, non-stick polymeric film TNT
CAP SHEET APP/ SBS	External side: Ceramic Chip self-protection, non-stick polymeric TNT (only overlap) Internal side: polymeric film PE/PP
BASE SHEET APP/ SBS	External side: sand Internal side: polymeric film PE/PP
Application method	Flame of propane gas

Lybra SBS 3mm Base Sheet

TECHNICAL CHARACTERISTICS				
CHARACTERISTIC	TEST METHOD	UNITS	NOMINAL VALUES	TOLERANCES
Visible defects	EN 1850-1	visible	Without defects	
Length	EN 1848-1	m	10,00 -1%	MLV
Width	EN 1848-1	m	1,000 -1%	MLV
Straightness	EN 1848-1	mm	20 mm x 10 m	MLV
Thickness	EN 1849-1	mm	3	± 0,2
Watertightness (A)	EN 1928	kPa	60	MLV
External fire performance	EN 13501-5	B roof	F Roof	
Reaction to fire	EN 13501-1	Class	F	Pass
Shear resistance longitudinal / transversal	EN 12317-1	N/50 mm	650 / 400	± 20%
Water vapour transmission proprieties Method A	EN 1931	μ / Sd (m)	20.000 / 30	± 2000
Tensile Strength Longitudinal / Transversal	EN 12311-1	N/50 mm	750 / 500	± 20%
Elongation at break Longitudinal / Transversal	EN 12311-1	%	35 / 40	- 15 absolut
Resistance to impact	EN 12691	mm	900	MLV
Resistance to static loading Method A	EN 12730	Kg	15 (Method A and B)	MLV
Resistance to tearing (nail shank)	EN 12310-1	N	160 / 160	- 30%
Dimensional stability Longitudinal / Transversal	EN 1107-1 met. A	%	± 0,3 %	MLV
Flexibility at low temperature	EN 1109	°C	-15	MLV
Flow resistance at elevated temperature	EN 1110	°C	90	MLV
Durability of watertightness against artificial ageing	EN 1296 / EN 1928	Kpa	=60	MLV
Durability of watertightness against chemicals	EN 1847 / EN 1928	Kpa	= 60	MLV

Lybra SBS 4mm Cap Sheet

TECHNICAL CHARACTERISTICS				
CHARACTERISTIC	TEST METHOD	UNITS	NOMINAL VALUES	TOLERANCES
Visible defects	EN 1850-1	visible	Without defects	
Length	EN 1848-1	m	10,00 -1%	MLV
Width	EN 1848-1	m	1,000 -1%	MLV
Straightness	EN 1848-1	mm	20 mm x 10 m	Pass
Thickness	EN 1849-1	mm	4 (mineral)	± 0,2
Watertightness (A)	EN 1928	kPa	60	MLV
External fire performance	EN 13501-5	B roof	F Roof	
Reaction to fire	EN 13501-1	Class	F	Pass
Tensile Strength Longitudinal / Transversal	EN 12311-1	N/50 mm	750 / 500	± 20%
Elongation at break Longitudinal / Transversal	EN 12311-1	%	35 / 40	- 15 absolut
Resistance to impact	EN 12691	mm	900	MLV
Resistance to static loading Method A	EN 12730	Kg	15	MLV
Resistance to tearing (nail shank)	EN 12310-1	N	160 / 160	- 30%
Dimensional stability Longitudinal / Transversal	EN 1107-1 met. A	%	± 0,3 %	MLV
Flexibility at low temperature	EN 1109	°C	-15	MLV
Flow resistance at elevated temperature	EN 1110	°C	100	MLV
Flow resistance at elevated temperature after artificial ageing	EN 1296 / EN 1110	°C	110	-10
Adhesion of granules	EN 12039	%	Max 30 %	MDV

Gemini APP 3mm Base Sheet

TECHNICAL CHARACTERISTICS				
CHARACTERISTIC	TEST METHOD	UNITS	NOMINAL VALUES	TOLERANCES
Visible defects	EN 1850-1	visible	Without defects	
Length	EN 1848-1	m	10,00 -1%	MLV
Width	EN 1848-1	m	1,000 -1%	MLV
Straightness	EN 1848-1	mm	20 mm x 10 m	MLV
Thickness	EN 1849-1	mm	3	± 0,2
Watertightness (A)	EN 1928	kPa	60	MLV
External fire performance	EN 13501-5	B roof	F Roof	
Reaction to fire	EN 13501-1	Class	F	Pass
Tensile Strength Longitudinal / Transversal	EN 12311-1	N/50 mm	750 / 500	± 20%
Elongation at break Longitudinal / Transversal	EN 12311-1	%	35 / 40	- 15 absolut
Resistance to tearing (nail shank)	EN 12310-1	N	160 / 160	- 30%
Dimensional stability Longitudinal / Transversal	EN 1107-1 met. A	%	± 0,3 %	MLV
Flexibility at low temperature	EN 1109	°C	-10	MLV
Flow resistance at elevated temperature	EN 1110	°C	120	MLV

Gemini APP 4mm Cap Sheet

TECHNICAL CHARACTERISTICS				
CHARACTERISTIC	TEST METHOD	UNITS	NOMINAL VALUES	TOLERANCES
Visible defects	EN 1850-1	visible	Without defects	
Length	EN 1848-1	m	10,00 -1%	MLV
Width	EN 1848-1	m	1,000 -1%	MLV
Straightness	EN 1848-1	mm	20 mm x 10 m	Pass
Thickness	EN 1849-1	mm	4 (mineral)	± 0,2
Watertightness (A)	EN 1928	kPa	60	MLV
External fire performance	EN 13501-5	B roof	F Roof	
Reaction to fire	EN 13501-1	Class	F	Pass
Tensile Strength Longitudinal / Transversal	EN 12311-1	N/50 mm	750 / 500	± 20%
Elongation at break Longitudinal / Transversal	EN 12311-1	%	35 / 40	- 15 absolut
Resistance to impact	EN 12691	mm	900	MLV
Resistance to static loading Method A	EN 12730	Kg	15	MLV
Resistance to tearing (nail shank)	EN 12310-1	N	160 / 160	- 30%
Dimensional stability Longitudinal / Transversal	EN 1107-1 met. A	%	± 0,3 %	MLV
Flexibility at low temperature	EN 1109	°C	-10	MLV
Flow resistance at elevated temperature	EN 1110	°C	120	MLV
Flow resistance at elevated temperature after artificial ageing	EN 1296 / EN 1110	°C	120	-10
Adhesion of granules	EN 12039	%	Max 30 %	MDV

Phoenix Super APAO 4mm Base Sheet

TECHNICAL CHARACTERISTICS				
CHARACTERISTIC	TEST METHOD	UNITS	NOMINAL VALUES	TOLERANCES
Visible defects	EN 1850-1	visible	Without defects	
Length	EN 1848-1	m	10,00 -1%	MLV
Width	EN 1848-1	m	1,000 -1%	MLV
Straightness	EN 1848-1	mm	20 mm x 10 m	MLV
Thickness	EN 1849-1	mm	4	± 0,2
Watertightness (A)	EN 1928	kPa	60	MLV
External fire performance	EN 13501-5	B roof	F Roof	
Reaction to fire	EN 13501-1	Class	F	Pass
Shear resistance longitudinal / transversal	EN 12317-1	N/50 mm	500 / 500	MLV
Water vapour transmission proprieties Method A	EN 1931	μ / Sd (m)	120.000 / 480	-20.000
Tensile Strength Longitudinal / Transversal	EN 12311-1	N/50 mm	900 / 650	± 20%
Elongation at break Longitudinal / Transversal	EN 12311-1	%	40 / 45	± 15 absolut
Resistance to impact	EN 12691	mm	1250	MLV
Resistance to static loading Method A	EN 12730	Kg	20	MLV
Resistance to tearing (nail shank)	EN 12310-1	N	200 / 200	-30 N
Dimensional stability Longitudinal / Transversal	EN 1107-1 met. A	%	± 0,3 %	MLV
Flexibility at low temperature	EN 1109	°C	-35	MLV
Flow resistance at elevated temperature	EN 1110	°C	140	MLV
Flexibility at low temperature after artificial ageing	EN 1296 / EN 1109	°C	-35	MLV
Flow resistance at elevated temperature after artificial ageing	EN 1296 / EN 1110	°C	140	-10
Artificial ageing by long-term exposure to the combination of Uv radiation, elevated temperature and water	EN 1297 / EN 1850-1	Visible	Pass	Without defects
Durability of waterthigness against artificial ageing	EN 1296 / EN 1928	Kpa	60	MLV
Durability of waterthigness against chemicals	EN 1847 / EN 1928	Kpa	60	MLV

Phoenix Super APAO 4mm Cap Sheet

TECHNICAL CHARACTERISTICS				
CHARACTERISTIC	TEST METHOD	UNITS	NOMINAL VALUES	TOLERANCES
Visible defects	EN 1850-1	visible	Without defects	
Length	EN 1848-1	m	10,00 -1%	MLV
Width	EN 1848-1	m	1,000 -1%	MLV
Straightness	EN 1848-1	mm	20 mm x 10 m	Pass
Thickness	EN 1849-1	mm	4	± 0,2
Watertightness (A)	EN 1928	kPa	60	MLV
External fire performance	EN 13501-5	B roof	F Roof	
Reaction to fire	EN 13501-1	Class	F	Pass
Shear resistance longitudinal / transversal	EN 12317-1	N/50 mm	500 / 500	MLV
Tensile Strength Longitudinal / Transversal	EN 12311-1	N/50 mm	900 / 650	± 20%
Elongation at break Longitudinal / Transversal	EN 12311-1	%	40 / 45	± 15 absolut
Resistance to impact	EN 12691	mm	1250	MLV
Resistance to static loading Method A	EN 12730	Kg	20	MLV
Resistance to tearing (nail shank)	EN 12310-1	N	200 / 200	-30 N
Dimensional stability Longitudinal / Transversal	EN 1107-1 met. A	%	± 0,3 %	MLV
Flexibility at low temperature	EN 1109	°C	-35	MLV
Flow resistance at elevated temperature	EN 1110	°C	140	MLV
Flexibility at low temperature after artificial ageing	EN 1296 / EN 1109	°C	-35	MLV
Flow resistance at elevated temperature after artificial ageing	EN 1296 / EN 1110	°C	140	-10
Adhesion of granules	EN 12039	%	Max 30 %	MDV