



BRANZ Appraised

Appraisal No. 768 [2023]

HITCHINS GUNDEC SUPER REINFORCED MODIFIED BITUMEN MEMBRANE SYSTEMS

Appraisal No. 768 [2023]

This Appraisal replaces BRANZ
Appraisal No. 768 [2012]



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



Hitchins New Zealand Limited

PO Box 40 749
Upper Hutt

Tel: 04 527 7248

Fax: 04 528 4813

Web: www.hitchins.co.nz



BRANZ

BRANZ

1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240,
New Zealand
Tel: 04 237 1170
branz.co.nz



Product

- 1.1 Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems are polyester and fiberglass reinforced, APP, SBS and SBS/APP polymer-modified bitumen sheet membranes in roll form. They are installed as torch-on, two-layer systems with a top layer finished with mineral chip, or plain and coated. They can also be installed as a single layer system onto concrete substrates with the top layer finished with mineral chip, plain and coated, or with traffic protection such as paving slabs or topping screed. The systems are for use on nominally flat, pitched and curved roofs, decks, gutters and parapets.

Scope

- 2.1 Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems have been appraised for use as waterproofing membranes for buildings within the following scope:
 - the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
 - with timber supporting structures designed and constructed in accordance with the NZBC; and,
 - with nominally flat or pitched roofs constructed to drain water to gutters and drain outlets complying with the NZBC; and,
 - with substrates of plywood sheet; and,
 - with decks that have a maximum size of 40 m²; and,
 - situated in NZS 3604 Wind Zones up to, and including, Extra High.
- 2.2 Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems have also been appraised for use as waterproofing membranes for external reinforced concrete and plywood roofs, pedestrian decks and balconies for buildings within the following scope:
 - up to 3-storeys with a maximum height from ground to eaves of 10 m and with a floor plan area limited only by seismic and structural control joints; and,
 - with the reinforced concrete structure designed and constructed in accordance with the NZBC; and,
 - with timber and steel supporting structures designed and constructed in accordance with the NZBC; and,
 - subject to maximum ultimate limit state (ULS) wind pressures of 4 kPa; and,
 - with nominally flat, pitched, or curved roofs constructed to drain water to gutters and drain outlets complying with the NZBC.
- 2.3 This Appraisal is limited to roofs, decks and balconies within the following scope:
 - constructed to suitable falls (refer to Paragraphs 13.3 and 13.4); and,
 - with no steps within the deck level, no integral roof gardens and no downpipes discharging directly onto the deck.

- 2.4 The design and construction of the substrate and movement and control joints is specific to each building, and therefore the responsibility of the building designer and building contractor and is outside the scope of this Appraisal.
- 2.5 The membranes must be installed by Hitchins New Zealand Limited licensed and trained installers.

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, the Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:
- Clause B2 DURABILITY:** Performance B2.3.1 (b) 15 years. Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems meet this requirement. See Paragraph 10.1.
- Clause E2 EXTERNAL MOISTURE:** Performance E2.3.1 and E2.3.2. Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems meet these requirements. See Paragraphs 13.1–13.6.
- Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems meet this requirement.

Technical Specification

- 4.1 The following materials, covered by this Appraisal, are marketed and supplied by Hitchins New Zealand Limited:
- **Gundec Super-NZ 3 mm Vent base sheet** - a 3 mm SBS modified, polyester 130 g reinforced [-15°C] bitumen roll with sticky bitumen strips to the underside face to ventilate the substrate and, where required, the structure cavity. It is supplied in 7.5 m long rolls.
 - **Gundec Super-NZ 3 mm All-purpose base sheet** - a 3 mm SBS modified polyester 130 g reinforced [-20°C] bitumen all-purpose base sheet membrane for a wide range of uses in conjunction with SBS and APP membranes. It is supplied in 10 m long rolls.
 - **Gundec Super-NZ 3 mm Multi-purpose self-adhesive base sheet** - a 3 mm APP modified polyester 130 g reinforced [-15°C] bitumen multi-purpose membrane system, or for use in conjunction with SBS and APP membranes. It is supplied in 10 m long rolls.
 - **Gundec Super-NZ 4 mm All-purpose cap sheet** - a 4 mm APP modified polyester 180 g reinforced [-15°C] bitumen all-purpose cap sheet membrane system, or for use in conjunction with SBS and APP membranes. It is supplied in 10 m long rolls.
 - **Gundec Super-NZ 4 kg Mineral grey cap sheet** - a 4 kg APP modified polyester 180 g reinforced [-15°C] grey bitumen mineral cap sheet for use in a two-layer system with SBS and APP base sheets. It is supplied in 10 m long rolls.
 - **Gundec Super-NZ 4 kg Mineral charcoal cap sheet** - a 4 kg APP modified polyester 180 g reinforced [-15°C] charcoal bitumen mineral cap sheet for use in a two-layer system with SBS and APP base sheets. It is supplied in 10 m long rolls.
 - **Gundec Super-NZ 4 kg Mineral white cap sheet** - 4 kg APP modified polyester 180 g reinforced [-15°C] white bitumen mineral cap sheet for use in a two-layer system with SBS and APP base sheets. It is supplied in 10 m long rolls.
 - **Gundec Super-NZ 4 mm Thermo adhesive carpark sheet** - a 4 mm SBS modified polyester 180 g reinforced [-25°C] thermal bitumen cap sheet with properties for hot-mix overlay membrane system for carparks. It is supplied in 10 m long rolls.
 - **Gundec Super-NZ 3 mm Fire X base sheet** - a 3 mm APP modified polyester 130 g reinforced [-15°C] bitumen cap sheet. It is supplied in 10 m long rolls.
 - **Gundec Super-NZ 4 mm Fire X cap sheet** - a 4 mm APP modified polyester 180 g reinforced [-15°C] bitumen base sheet. It is supplied in 10 m long rolls.
 - **Gundec Super-NZ 4.5 kg + Fire X mineral grey cap sheet** - a 4.5 kg APP modified polyester 180 g reinforced [-15°C] mineral grey bitumen cap sheet. It is supplied in 8 m long rolls.



- **Gundec Super-NZ 4.5 kg + Fire X mineral charcoal cap sheet** - a 4.5 kg APP modified polyester 180 g reinforced [-15°C] mineral charcoal bitumen cap sheet. It is supplied in 10 m long rolls.
- **Gundec Super-NZ 4.5 kg + Fire X mineral white cap sheet** - a 4.5 kg APP modified polyester 180 g reinforced [-15°C] mineral white bitumen cap sheet. It is supplied in 10 m long rolls.
- **Gundec Super-NZ 4 mm Vent mineral grey re-roof sheet** - a 4 mm SBS modified, polyester 130 g reinforced [-15°C] grey mineral bitumen vented re-roof cap sheet roll. It is supplied in 7.5 m long rolls.
- **Gundec Super-NZ 1.9 kg Insulation sheet** - a 1.9 kg APP modified, polyester and fibreglass fibres 7.1 mm thick base membrane to improve noise reduction within the membrane system. It is supplied in 10 m long x 1.05 m wide rolls.

Accessories

- **Gundec Pro Anti-root** - a one-component, water-based elastomeric, fibre-reinforced bituminous waterproofing compound with anti-root additive for bedding-in Gundec polyester fabric. It is used for waterproofing the membranes and for incorporating a holding bandage to the top of the vertical wall tanking membrane to the substrate to create a complete seal of the top surface. It is supplied in 20 L pails or 4 L cans. It can be plastered or painted over.
- **Gundec Primer** - a one-component, solvent-based, black bituminous primer applied to the substrate for the installation of torch-on bitumen membranes. It is supplied in 20 L pails or 4 L cans.
- **Gundec Self-stik** - a waterborne acrylic co-polymer pressure-sensitive contact adhesive green primer that dries to provide a sticky surface for the improved adhesion of self-adhesive (peel and stick) membranes. It provides adhesion to cement blocks and concrete in cold conditions. It is supplied in 4, 10 and 20 L pails.
- **Gundec Polyester Fabric** - is used for full waterproof lamination with Gundec Pro Anti-root compound or 200 mm bandages bedded in Gundec Pro Anti-root liquid compound to seal the top edge of Gundec wall tanking membranes. It is supplied in 1 m wide rolls.
- **Formrok 28 P Sealant** - a one-component, grey, very flexible polyurethane sealant for general purpose sealing. It is supplied in a 720 g sausage.
- **Tixophalte Sealant** - a solvent-based, elastomeric black bituminous adhesive/sealant used for general sealing detail work with bitumen membranes. It is supplied in 310 ml cartridges.
- **Gundec Fast-bond** - a water-based bituminous emulsion adhesive compound (glue) for the installation of Gundec Protecto Board.
- **Elotene Kontabit** - a double-sided adhesive tape for sealing details in various situations including a slip membrane in stress areas and capping parapets. It is supplied in a range of widths from 100-250 mm in 10 m long rolls.
- **Gundec Triafilli Fillet** - a reinforced flexible torch-on bitumen fillet installed into internal corners prior to the installation of the torch-on membrane.
- **Gundec PolyLastic** - a solvent-based, moisture-cured, flexible grey polyurethane (rubber-like) coating compound for sealing around pipes and flanges. It is supplied in 4 and 10 L cans.
- **Gundec Silver** - a solvent-based decorative bituminous aluminium coating.
- **Gundec Protecto Board** - a profiled durable foam board adhered to the surface with Gundec Fast-bond.
- **Tefond** - a high-density, extruded polyethylene protection sheet with 9 mm interlocking jointing profiles, to provide a continuous waterproof sheet with good drainage. It is supplied in 20 x 2 m rolls with Tefond fasteners.
- **Tefond Drain** - a high-density extruded polyethylene protection sheet with 9 mm interlocking jointing profiles to provide a continuous waterproof sheet incorporating geotextile over-surfaced cloth for drainage. It is supplied in 20 x 2 m rolls with Tefond fasteners.
- **Traffigard Coating** - a thixotropic, durable, waterborne flexible durable acrylic coating for roofs decks and general use.



- **Gundec Cover-bond** - two-components [flexible resin and powder matrix], which are mixed to provide an emulsion-rich compound with waterproofing and bonding properties. It can incorporate a reinforcement sheet and bandage. Both components are supplied together in a 20 kg pail.
- **Gundec Royal Flex** - two-components [flexible resin and powder matrix], which are mixed to provide an economic emulsion-rich tile embedding compound. Both components are supplied together in a 25 L pail.
- **Gundec Screed** - a resin-rich bitumen matrix-filled plaster screed compound for surface repairs and for building in improved falls.
- **Gundec One** - a range of single-component, moisture-cured polyurethane coatings for membranes, decks and floor hi-build membrane systems.
- **Maxistud perforated drain** - a high-density, extruded polyethylene horizontal protection and drainage sheet with 20 mm interlocking profiles that holds water to feed the plants in hot weather.
- **Tegotherm Polyiso Super 50 mm Foam** - a high-density extruded PIR insulation foam sheet.
- **Hitchins Epo-Flush 604** - a two-component epoxy compound that can be sanded smooth when dry.
- **Hitchins Moss-Killer** - a concentrated moss, mould and lichen solution treatment.
- **Hitchins Chemwash** - a concentrated chemical surface cleaning solution treatment.
- **Perlastic 2100 DP/Black** - a single-component, waterborne, chemically-resistant asphalt-based formula available in three grades which can be brush/roll, trowel or spray-applied. It has a catalyst additive for winter application to accelerate drying.

Handling and Storage

- 5.1 Handling and storage of all materials whether on-site or off-site is under the control of the Hitchins New Zealand Limited licensed and trained installers. Dry storage must be provided for all products and the rolls of membrane must be stored in an upright position.

Technical Literature

- 6.1 This Appraisal must be read in conjunction with:
- Hitchins' Gundec Super Detail Drawings Introduction, Version 2.0.
- 6.2 All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

- 7.1 The Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems are for use on roofs, decks, balconies, gutters and parapets where an impervious waterproof membrane is required to prevent damage to building elements and adjoining areas. The products can be used on new or existing buildings. Hitchins New Zealand Limited should be consulted as to the suitability of any existing substrates prior to using the Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems.
- 7.2 The effective control of internal moisture must be considered at the design stage due to the impermeability of the membranes. Refer to the BRANZ Good Practice Guide: Membrane Roofing and the Waterproofing Membrane Association: Code of Practice for Reinforced Modified Bitumen Membranes [RMBM] Systems for Roofs and Decks.
- 7.3 Refer to Table 1 for the composition of the systems within the Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems.
- 7.4 Hitchins New Zealand Limited provide specifications covering the installation of plywood substrate.
- 7.5 Hitchins New Zealand Limited provide specifications covering the remedial preparation and resurfacing of existing membrane roofs.

Table 1: System Combinations

Two-layer systems (plywood and concrete substrates)		
Vented with base layer combined	Top layer [cap sheet]	Membrane finish
Gundec Super-NZ 3 mm Vent base sheet and Gundec Super-NZ 3 mm All-purpose base sheet	Gundec Super-NZ 4 kg Mineral cap sheet [grey, charcoal, or white]	Natural multi-coloured mineral
	Gundec Super-NZ 4 mm All-purpose cap sheet	Coated silver
		Sealed and coated Traffigard
Base sheet layer	Top layer [cap sheet]	Membrane finish
Gundec Super-NZ 3 mm All-purpose base sheet	Gundec Super-NZ 4 kg Mineral cap sheet [grey, charcoal, or white]	Natural multi-coloured mineral
	Gundec Super-NZ 4 mm All-purpose cap sheet	Coated silver
		Sealed and coated Traffigard
Gundec Super-NZ 3 mm Multi-purpose self-adhesive base sheet	Gundec Super-NZ 4 kg Mineral cap sheet [grey, charcoal, or white]	Natural multi-coloured mineral
	Gundec Super-NZ 4 mm All-purpose cap sheet	Coated silver
		Sealed and coated Traffigard
Two-layer systems for gutters (plywood and concrete substrates)		
Base sheet layer	Top layer [cap sheet]	Membrane finish
Gundec Super-NZ 3 mm All-purpose base sheet	Gundec Super-NZ 3 mm All-purpose cap sheet	Coated silver or Formrok 335
		Sealed and coated Traffigard
Gundec Super-NZ 3 mm Multi-purpose self-adhesive base sheet	Gundec Super-NZ 3 mm All-purpose cap sheet	Coated silver or Formrok 335
		Sealed and coated Traffigard
Single layer system for re-roof		
Re-surfacing aged existing roof	Top layer [cap sheet]	Membrane finish
Repaired, prepared existing roof	Gundec Super-NZ 4 mm Vent mineral grey re-roof sheet	Natural multi-coloured mineral
Two-layer system with Fire X membranes		
Base sheet layer	Top layer [cap sheet]	Membrane finish
Gundec Super-NZ 3 mm Fire X base sheet	Gundec Super-NZ 4 mm Fire X cap sheet	Coated silver or Formrok 335
		Sealed and coated Traffigard
	Gundec Super-NZ 4.5 kg + Fire X mineral cap sheet [grey, charcoal or white]	Natural multi-coloured mineral
Carpark thermo self-adhesive membrane system with hot mix overlay		
Surface preparation	Top layer [cap sheet]	Overlay finish
Prepare and prime with Gundec primer	Gundec Super-NZ 4 mm Thermo adhesive carpark sheet	Hot mix bitumen overlay by roading contractor [outside the scope of this Appraisal]
Insulation sound deadening multi-layer system		
Vented base layer	Middle membrane layer	Membrane finish
Gundec Super-NZ 1.9 kg Insulation sheet	Gundec Super-NZ 4 mm All-purpose cap sheet	Tile protecto sheet
		Tile finish

Structure

- 8.1 Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems are fully bonded single or double layer systems and are suitable for use in areas subject to maximum wind pressures of 4 kPa ULS.

Substrates

Plywood and Timber Roof Framing

- 9.1 Plywood must be treated to H3 [CCA treated]. LOSP treated plywood must not be used. Plywood must comply with NZBC Acceptable Solution E2/AS1, Paragraphs 8.5.3 and 8.5.5. Where specific design is used [i.e. outside the scope of NZBC E2/AS1], the plywood thickness and fixing size may increase and centres may decrease to meet specific wind loadings. Timber framing must comply with NZS 3604, or where specific engineering design is used, the framing shall be of at least equivalent stiffness to the framing provisions of NZS 3604, or comply with the serviceability criteria of AS/NZS 1170. In all cases, framing must be provided so that the maximum span of the substrate as specified by the substrate manufacturer is met and all sheet edges are fully supported.

Steel Roof Framing

- 9.2 Steel framing must comply with the NZBC and subject to specific engineering design shall be of at least equivalent stiffness to the framing provisions of NZS 3604, or comply with the serviceability criteria of AS/NZS 1170. In all cases, framing must be provided so that the maximum span of the substrate as specified by the substrate manufacturer is met and all sheet edges are fully supported. Particular attention must be paid to steel framing to limit deflection and movement.

Concrete

- 9.3 Concrete substrates must be to a specific engineering design meeting the requirements of the NZBC, such as concrete construction to NZS 3101.

Existing Construction

- 9.4 A thorough inspection of the substrate must be made to ensure it is in fit condition and does not contain any materials that will adversely affect the performance of the membrane.
- 9.5 Repairs must be undertaken, where applicable, to ensure the substrate is sound, the joints are sealed, and the flashings are sound. Plywood substrates must be checked for screw fixings, and if necessary refixed as for new plywood.

Durability

Serviceable Life

- 10.1 The Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems are expected to have a serviceable life of at least 15 years, provided they are designed, used, installed and maintained in accordance with this Appraisal, the Technical Literature and Hitchins New Zealand Limited Process Maintenance Advice document.

Chemical Resistance

- 10.2 Industrial air pollutants and windborne salt deposits should not significantly affect the durability of the membranes. However, the long term properties of the material may be affected by contact with petroleum-based products such as oils, greases and solvents.

Maintenance

- 11.1 The membrane roof and deck systems must be regularly [at least annually] checked for damage, rubbish, debris or coating breakdown. Damage, such as small punctures and tears must be repaired and coatings reapplied as recommended by Hitchins New Zealand Limited.
- 11.2 Special care must be taken when inspecting the membrane roof systems to ensure the continuing prevention of moisture ingress, and repairs must be undertaken where required.
- 11.3 Drainage outlets must be maintained to operate effectively.

- 11.4 After the contract maintenance period, the ongoing building maintenance is the responsibility of the property owner. Hitchins New Zealand Limited provide a comprehensive document covering this requirement, including the notification requirement when any alterations are carried out to the building roof.

Prevention of Fire Occurring

- 12.1 Separation or protection must be provided to the Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems from heat sources such as fireplaces, heating appliances, flues and chimneys. Part 7 of NZBC Verification Method C/VM1 and Acceptable Solution C/AS1, and NZBC Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.
- 12.2 Hitchins Gundec Super-NZ Fire X Membranes (plain and mineral) have fire retardant properties.

External Moisture

- 13.1 Roofs, decks and balconies must be designed and constructed to shed precipitated moisture. They must also take account of snowfalls in snow prone areas. A means of meeting code compliance with NZBC Clause E2.3.1 is given by the Technical Literature which aligns with details in NZBC Acceptable Solution E2/AS1.
- 13.2 When installed in accordance with this Appraisal and the Technical Literature, the Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems will prevent the penetration of water and will therefore meet code compliance with NZBC Clause E2.3.2. The membranes are impervious to water and will give a weathertight roof, deck or balcony.
- 13.3 Roof, deck and balcony falls must be built into the substrate and not created with mortar screeds applied over the membrane.
- 13.4 The minimum fall to roofs is 1 in 30, decks is 1 in 40 and gutters is 1 in 100. All falls must slope to an outlet. Inadequate falls will allow moisture to collect and increase the risk of deterioration of the membranes.
- 13.5 Allowance for deflection and settlement of the substrate must be made in the design of the roof, deck or balcony to ensure falls are maintained and no ponding of water can occur.
- 13.6 The Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems are impermeable; therefore a means of dissipating construction moisture must be provided in the building design and construction to meet code compliance with NZBC Clause E2.3.6.
- 13.7 Drainage flanges must be used for any outlet and must be fitted with a grate or cage to reduce potential sources of blockages. An overflow must be provided where the roof, deck or balcony does not drain to an external gutter or spouting.
- 13.8 Penetrations and upstands of the membranes must be raised above the level of any possible flooding caused by the blockage of roof, deck or balcony drainage.
- 13.9 The design of details not covered by the Technical Literature is subject to specific weathertightness design and is outside the scope of this Appraisal.

Water Supplies

- 14.1 The Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems have not been assessed for roofs used for the collection of potable water.

Installation Information

Installation Skill Level Requirement

- 15.1 All design and building work must be carried out in accordance with the Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems Technical Literature and this Appraisal. All building work must be undertaken by Hitchins New Zealand Limited licensed and trained installers. Where the work involves Restricted Building Work this must also be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.



Preparation of Substrates

- 16.1 Substrates must be dry, clean and stable, smooth and free from nibs, sharp edges, dust, dirt or other materials such as oil, grease or concrete formwork release agents before installation commences. All surface defects and screw holes must be filled and flushed with Hitchins Epo-Flush 604, a two-component epoxy, to achieve an even and uniform surface.
- 16.2 The relative humidity of concrete substrates must be 75% or less before membrane application. The concrete can be checked for dryness by using a hygrometer, as set out in BRANZ Bulletin No. 585.
- 16.3 The moisture content of the plywood and timber substructure must be a maximum of 18% and the plywood sheets must be dry at time of membrane application. This will generally require plywood sheets to be covered until just before the membrane is laid or the sheet surface and edges pre-primed, to prevent rain wetting.
- 16.4 All substrates must be primed with Gundec Primer and left to dry [4-5 hours] before the membranes are installed. Primed substrates exposed to the weather for more than 96 hours will require re-priming.

Membrane Installation

- 17.1 The membranes must be installed in accordance with Hitchins New Zealand Limited Technical Literature.
- 17.2 All roof and wall junctions must have a 20 x 20 mm fillet installed at the junction. Concrete substrate junctions must have a 20 x 20 mm cement mortar fillet installed. Alternatively, Gundec Triafilli bitumen fillet can be torch-applied to the junction. All external edges must be chamfered to a 5 mm radius to remove sharp edges.
- 17.3 The membranes must be unrolled without tension onto the prepared substrate and allowed to 'relax' for at least 30 minutes prior to installation.
- 17.4 The membranes are installed from the lowest point and each layer is installed across the roof fall allowing a minimum 75 mm side overlap and a 150 mm end overlap where the discharge water is running over the lap joint. The cap sheet layer must be offset against the base sheet layer by approximately 500 mm and be fully bonded to the base sheet. *[Note: In certain situations the membranes can also be installed up the roof falls. Please refer to Hitchins New Zealand Limited for technical recommendation.]*

Inspections

- 18.1 Critical areas of inspection for waterproofing systems are:
 - Construction of substrates, including crack control and installation of bond breakers and movement control joints.
 - Moisture content of the substrate prior to the application of the membranes.
 - Acceptance of the substrate by the membrane installer prior to application of the membranes.
 - Installation of the membranes to the Technical Literature.

Health and Safety

- 19.1 Safe use and handling procedures for the Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems are provided in the Technical Literature. The products must be used in conjunction with the relevant Material Safety Data Sheets for each membrane.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

- 20.1 The Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems have been tested according to the requirements of EN13707 and are covered by CE Certification. The information and test results have been reviewed by BRANZ and found to be satisfactory.



Other Investigations

- 21.1 A durability opinion has been provided by BRANZ technical experts.
- 21.2 Installation of the membranes have been assessed by BRANZ for practicability of installation and found to be satisfactory.
- 21.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

- 22.1 The manufacture of the membranes have not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 22.2 The quality of the supply of products to the New Zealand market is the responsibility of Hitchins New Zealand Limited.
- 22.3 Quality on-site is the responsibility of the Hitchins New Zealand Limited licensed and trained installers.
- 22.4 Designers are responsible for the building design, and building contractors are responsible for the quality of construction of substrate systems in accordance with the instructions of Hitchins New Zealand Limited and this Appraisal.
- 22.5 Building owners are responsible for the maintenance of the membrane systems in accordance with the instructions of Hitchins New Zealand Limited and this Appraisal.

Sources of Information

- AS/NZS 1170:2002 Structural design actions.
- AS/NZS 2269:2012 Plywood – structural.
- BRANZ Bulletin No. 585 Measuring Moisture in Timber and Concrete, June 2015.
- BRANZ Good Practice Guide: Membrane Roofing (Second Edition), October 2015.
- Code of Practice for Reinforced Modified Bitumen Membrane (RMBM) Systems for Roof and Decks *[for selection, design and installation]*, Waterproof Membrane Association Incorporated, March 2021.
- NZS 3101:2006 Concrete structures standard.
- NZS 3604:2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.



BRANZ Appraised
Appraisal No. 768 [2023]

BRANZ Appraisal
Appraisal No. 768 [2023]
19 December 2023

HITCHINS GUNDEC SUPER
REINFORCED MODIFIED
BITUMEN MEMBRANE SYSTEMS



In the opinion of BRANZ, **Hitchins Gundec Super Reinforced Modified Bitumen Membrane Systems** are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Hitchins New Zealand Limited**, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the Technical Literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. **Hitchins New Zealand Limited:**
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions;
 - d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and quality of work;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by **Hitchins New Zealand Limited**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Hitchins New Zealand Limited** or any third party.

For BRANZ

Claire Falck

Chief Executive

Date of Issue:

19 December 2023