Certificate no: CMNZ10007

Version: 02

Original issue date: 07 August 2020 Version date: 29 May 2025

1. Certificate Holder Details





TPO Logistics NZ Ltd 15 Kahikatea Flat Road Dairy Flat

Auckland

Tel: 0800 423 355
Email: admin@gaf.nz
Web: www.gafroofing.co.nz

2. Product Certification Body

BRANZ Limited

1222 Moonshine Road RD1, Porirua 5381 Private Bag 50 908 Porirua 5240 New Zealand

Tel: 04 237 1170

 $\pmb{ Email: \underline{assuranceservices@branz.co.nz}}\\$

Web: www.branz.nz

Complaints: The complaints process for this

certificate can be found here:

https://www.branz.co.nz/codemark-info/complaints-and-appeals/



Product Certificate

Everguard and Everguard Extreme TPO Roof and Deck Membranes

3. Description of Building Method or Product

Everguard and Everguard Extreme TPO Roof and Deck Membranes are single-ply, polyester fabric reinforced, thermoplastic polyolefin (TPO) fully bonded waterproofing sheet membranes for roofs and decks.

Everguard is a standard membrane and Everguard Extreme has increased ultraviolet (UV) inhibitors, and both are available in white or grey. Rolls are wrapped in plastic printed with the GAF mark and Everguard TPO. Each roll has a sticker attached which gives the product, factory and colour codes. A manufacturing batch number is also printed on the top edge of the membrane. Packaging or containers identify other components and materials.

4. Intended use of Building Method or Product

Everguard and Everguard Extreme TPO Roof and Deck Membranes are synthetic, single-ply waterproofing membranes for use on nominally flat and low-pitch roofs and decks on buildings within the limitations as stated in Section 6 of this Product Certificate.

5. New Zealand Building Code Provisions

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2, B1.3.3 (h) and B1.3.4. Clause B2 DURABILITY: Performance B2.3.1 (b) 15 years and B2.3.2 (a).

Clause E2 EXTERNAL MOISTURE: Performance E2.3.1, E2.3.2, E2.3.6 and E2.3.7.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1.



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6. Conditions and Limitations of Use

Everguard and Everguard Extreme TPO Roof and Deck Membranes are suitable for use as roof and deck waterproofing membranes on buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; or,
- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regard to building height and floor plan area when subject to specific structural design; and,
- with substrates of plywood, Strandsarking (roofs only), cross-laminated timber (CLT) or suspended concrete slab; and,
- with minimum falls for plywood, CLT and Strandsarking roofs of 1:30, suspended concrete slab of 1:60 and decks of 1:40; and,
- with deck size limited to 40 m²; and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High.

Everguard and Everguard Extreme TPO Roof and Deck Membranes are suitable for use as roof and deck waterproofing membranes on buildings within the following scope:

- subject to specific structural and weathertightness design; and,
- with substrates of plywood or suspended concrete slab; and,
- situated in specific design wind pressures up to a maximum design differential ultimate limit state (ULS) of 6 kPa; and,
- with the weathertightness design of junctions for each specific structure being the responsibility of the building designer.

Roofs and decks waterproofed with Everguard and Everguard Extreme TPO Roof and Deck Membranes must be designed and constructed in accordance with the following limitations:

- nominally flat roofs and decks and pitched roofs constructed to drain water to gutters and drainage outlets complying with the NZBC;
 and.
- with no steps within the deck level, no integral roof gardens and no downpipes directly discharging to decks; and,
- with the deck membranes continually protected from physical damage by a pedestal protection system.

The design and construction of the substate and movement and control joints are specific to each building and therefore is the responsibility of the building designer and building contractor and is outside the scope of this Product Certificate.



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HANDLING AND STORAGE

Handling and storage of all materials, whether on-site or off-site, is under the control of the TPO Logistics NZ Ltd approved applicators. Dry storage must be provided for all products and the rolls of membrane must be lying down on pallets and protected.

INSTALLATION SKILL LEVEL REQUIREMENT

Everguard and Everguard Extreme TPO Roof and Deck Membranes must be installed by TPO Logistics NZ Ltd approved applicators.

Installation of substrates must be completed by or under the supervision of Licensed Building Practitioners (LBP) with the relevant Licence Class, in accordance with instructions given within the Reference Document and this Product Certificate.

REFERENCE DOCUMENT:

This Product Certificate must be read in conjunction with:

• GAF Everguard TPO Technical Details, dated 28 May 2025.

7. Health and Safety Information

Everguard and Everguard Extreme TPO Roof and Deck Membranes are TPO-based membranes. Suppliers' instructions and typical practices for working with, handling and maintaining TPO-based membranes should be observed. Safe use and handling procedures for the membranes are provided in the Reference Document. The products must be used in conjunction with the relevant Materials Safety Data Sheet.

8. Basis for Certification

TESTING

The following testing has been carried out on Everguard and Everguard Extreme TPO Roof and Deck Membranes:

• Shear/joint strength, peel adhesion, resistance to aging, adhesion to plywood, resistance to impact, resistance to frost, resistance to freeze/thaw, resistance to UV, watertightness, artificial ageing by exposure to elevated temperatures, artificial ageing by UV radiation, water vapour properties, resistance to cold bending, tensile properties, resistance to static load and resistance to tearing. These assessments have been reviewed by BRANZ and were found satisfactory.

EXPERT JUDGEMENT

An opinion on the durability of Everguard and Everguard Extreme TPO Roof and Deck Membranes has been given by BRANZ technical
experts.



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QUALITY

- The Reference Document has been examined by BRANZ and found to be satisfactory.
- The quality of supply to the market is the responsibility of TPO Logistics NZ Ltd.
- Quality of installation is the responsibility of the TPO Logistics NZ Ltd approved applicator.
- Designers are responsible for the substrate design, and building contractors are responsible for the quality of construction of substrate systems in accordance with the instructions of the substate manufacturer, TPO Logistics NZ Ltd and this Product Certificate.

9. Supporting Documentation for Certification

- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B2 Durability, 2nd Edition, Amendment 12, 28
 November 2019.
- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause F2 Hazardous Building Materials, 1st Edition, Amendment 3, 1 January 2017.
- AS/NZS 1170:2002 Structural design action General principles.
- AS/NZS 2269:2012 Plywood Structural.
- BRANZ Appraisal No. 823 Everguard and Everguard Extreme TPO Roof and Deck Membranes.
- BRANZ Bulletin No. 585 Measuring moisture in timber and concrete.
- BRANZ Durability Opinion TP10702 Durability Opinion on Everguard TPO Roof Membrane, dated 7 January 2020.
- BRANZ E2 Weathertightness review of Everguard and Everguard Extreme TPO Roof and Deck Membranes, dated 15 May 2025.
- BRANZ Good Practice Guide: Membrane roofing (Second Edition), October 2015.
- C1-C6 Protection from Fire Acceptable Solution C/AS1 Protection from fire for buildings with sleeping (residential) and outbuildings (risk group SH), 2nd Edition, 2 November 2023.
- NZS 3101:2006 The design of concrete structures.
- 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.
- Verification Methods E2/VM1 and Acceptable Solution E2/AS1, E2/AS2 and E2/AS3 for New Zealand Building Code Clause E2 External Moisture, 3rd Edition, Amendment 10, 5 November 2020.



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Everguard and Everguard Extreme TPO Roof and Deck Membranes



10. Supporting Information About Description

PRODUCT SPECIFICATION

Everguard and Everguard Extreme TPO Roof and Deck Membranes - are a TPO sheet laminated around a woven polyester reinforcement. Everguard is the standard product and Everguard Extreme has increased UV inhibitors. They are supplied in grey or white and in rolls 1.1, 1.5 and 2 mm thick, 1.2, 1.5 and 3 m wide and 30.5 m long.

Everguard TPO Bonding Adhesive - a solvent-based, rubberised contact adhesive used to bond the membrane to common substrates. It is supplied in 5 US Gallon pails.

Everguard H20 Bonding Adhesive – water-based, rubberised contact adhesive used to bond the membrane to common substrates. It is supplied in 5 US Gallon pails.

Everguard TPO Seam Cleaner - a solvent-based liquid for cleaning seams prior to heat welding. It is supplied in 1 US Gallon pails.

Preformed Vent Boots - a moulded TPO membrane boot designed to fit 25-150 mm diameter pipes. They are supplied 1.9 mm thick with a stainless steel clamping ring.

Preformed Corners - moulded TPO membrane universal style corner for both inside and outside corners. They are supplied 1.5 mm thick with 4×100 mm sides and 150 mm flange.

UN-55 Detailing Membrane - an unreinforced TPO membrane flashing/reinforcement material for penetrations and corners, used where preformed boots cannot be used. It is supplied as 1.3 mm thick membrane, 610 mm wide and 15 m long roll.

UN-55 T-Joint Cover Patches - unreinforced TPO membrane cover patches for sealing over T-joints. They are supplied as 1.3 mm thick round patches.

Cut Edge Sealant - a polymer-based sealant designed to seal all cut reinforced edges of Everguard and Everguard Extreme TPO Roof and Deck Membranes. It is supplied as a clear liquid in 550 ml squeeze bottles.

Preformed Split Pipe Boots - fabricated TPO membrane boots in three sizes designed to accommodate most common pipes and conduits. They are supplied 1.1 mm thick boots to fit 20-50 mm, 75-125 mm and 150-200 mm penetrations.

Corner Curb Wraps - fabricated corners for flashing curbs or plinths. They are in four standard sizes designed to flash curbs or plinths that are 610, 914, 1,220 or 1,524 mm in size. They are supplied in sizes of 340, 495, 648 and 800 mm.

Pourable Sealer Pockets – moulded TPO membrane pockets used to waterproof irregular shaped roof penetrations. They are supplied as 1.8 mm thick, $225 \times 150 \times 100 \text{ mm}$ ovals with a 75 mm base and coloured white only.



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11. Supporting Information About Intended Use

GENERAL

Everguard and Everguard Extreme TPO Roof and Deck Membranes 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.

Everguard and Everguard Extreme TPO Roof and Deck Membranes can be adversely affected by contact with bituminous substances. The membranes' supplier should be contact for advice in this situation.

The effective control of internal moisture must be considered at the design stage due to the impermeability of the membrane. Refer to the BRANZ Good Practice Guide: Membrane Roofing.

Where regular foot traffic on the roof is envisaged i.e. maintenance of lift equipment, a walkway should be installed to ensure the membranes are protected. The Everguard and Everguard Extreme TPO Roof and Deck Membranes are designed for limited, irregular pedestrian access only.

When used on decks, Everguard and Everguard Extreme TPO Roof and Deck Membranes require a pedestal protection system. TPO Logistics NZ Ltd should be contacted for the best system to meet design requirements.

Refer to TPO Logistics NZ Ltd for deck foot traffic protection system specifications.

SUBSTRATES

PLYWOOD

Plywood must be treated to H3 (CCA treated). LOSP treated plywood must not be used. In all cases, framing must be provided so that the maximum span of the substrate as specified by the substrate manufacturer is met and that all sheet edges are fully supported.

Plywood should comply with Section 8.5 of NZBC Acceptable Solution E2/AS1 when the product is being used within the scope limitations of E2/AS1. Where the product is being used within the scope of this Product Certificate, but outside the scope limitations of E2/AS1, plywood substrates and the supporting framing shall be subject to specific engineering design.

CONCRETE

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

Strandsarking must be installed in accordance with the manufacturer's instructions and BRANZ Appraisal No. 946.

CROSS-LAMINATED TIMBER (CLT)

CLT must be installed in accordance with the manufacturer's instructions.



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BUILDING CODE

B1 STRUCTURE

Timber framing systems 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 that all sheet edges are fully supported.

Everguard and Everguard Extreme TPO Roof and Deck Membranes fully bonded are suitable for use in areas subject to maximum wind pressure of 6 kPa ULS, subject to the limitations of the substrate.

B2 DURABILITY

Serviceable Life

Everguard and Everguard Extreme TPO Roof and Deck Membranes when subjected to normal conditions of environment and with proper maintenance can expect to have a serviceable life of at least 15 years.

C2 PREVENTION OF FIRE OCCURRING

Everguard and Everguard Extreme TPO Roof and Deck Membranes must be separated from fireplaces, heating appliances and chimneys. Part 7 of NZBC Acceptable Solution C/AS1 and NZBC Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

E2 EXTERNAL MOISTURE

Roofs and decks 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 Reference Document.

When installed in accordance with this Product Certificate and the Reference Document, Everguard and Everguard Extreme TPO Roof and Deck Membranes 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 or deck.

Everguard and Everguard Extreme TPO Roof and Deck Membranes 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.

The Reference Document includes details for weathertightness within scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1. The design of details outside this scope or not covered by the Reference Document must be subject to specific weathertightness design and is outside the scope of this Product Certificate.

The minimum fall for plywood, CLT and Strandsarking roofs is 1 in 30, for suspended concrete slabs 1 in 60, for decks 1 in 40 and for gutters 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 membrane. (Note: Where possible, BRANZ recommends a fall of 1 in 60 for gutters.) Roof and deck falls must be built into the substrate.

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 does not drain to an external gutter or spouting.

Penetrations and upstands of the membrane must be raised above the level of any possible flooding caused by blockage of roof drainage.



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WATER SUPPLIES

Water is not contaminated by Everguard and Everguard Extreme TPO Roof and Deck Membranes, which comply with AS/NZS 4020.

The first 25 mm of rainfall from a newly installed Everguard and Everguard Extreme TPO Roof and Deck Membranes roof must be discarded before drinking water collection starts. This is to remove residues which may have developed in the process involved in the production of Everguard and Everguard Extreme TPO Roof and Deck Membranes.

The Everguard and Everguard Extreme TPO Roof and Deck Membranes have been shown to comply with AS/NZS 4020, but it must be noted that all water collected off roof surfaces made from any material is considered to be non-potable due to possible contamination from other sources. Water collection in this way can only be considered potable if it has been passed through a suitable sterilisation system.

Sterilisation systems have not been assessed and are outside the scope of this Product Certificate.

PREPARATION OF SUBSTRATES

Substrates must be dry, clean and stable before installation commences. Surfaces must be smooth and free from nibs, sharp edges, dust, dirt or other materials such as oil, grease or concrete formwork release agents. All surface defects must be filled to achieve an even and uniform surface.

Concrete substrates can be checked for dryness by using a hygrometer, as set out in BRANZ Bulletin No. 585. The relative humidity of the concrete must be 75% or less before membrane application.

The moisture content of a timber substructure must be a maximum of 20% and plywood sheet must be dry at time of membrane application. This will generally require plywood sheets to be covered until just before the membranes are laid, to prevent rain wetting.

MEMBRANE INSTALLATION

The installation of these membrane systems is very complex and limited to approved applicators only. The Reference Document should be referred in all instances for the correct procedures.

INSPECTIONS

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 membrane.
- Acceptance of the substrate by the membrane installer prior to application of the membrane.
- Installation of the membrane to the Reference Document instructions.



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MAINTENANCE REQUIREMENTS

Maintenance requirements of the membrane are provided by the membrane supplier.

In the event of damage to the membrane, it must be repaired by removing the damaged portion and applying a patch as for new work. Drainage outlets must be maintained to operate effectively.

12. Supporting Information About Conditions and Limitations of Use

All conditions and limitations provided as stated in this Product Certificate.

Signatures

Galck

Claire Falck

CEO, BRANZ Limited.

All CodeMark certificates that are current much be registered with MBIE. MBIE maintains a register of valid product certificates. <u>Please find</u> the register here.

If the certificate is not listed on this register or it appears as (SUSPENDED), it is not a valid CodeMark certificate and does not have to be accepted by a building consent authority as establishing compliance with the New Zealand Building Code.

