



PRODUCT CERTIFICATE

THIS IS TO CERTIFY THERMAKRAFT WATERGATE PLUS 295 WALL UNDERLAY

Certificate No: BRANZ-CM-1002
Date of Issue: 11 January 2019
Revision Date: 11 January 2022

CERTIFICATE HOLDER



Thermakraft Limited

11 Turin Place
East Tamaki
Auckland, 2013
New Zealand

Tel: 0800 806 595
Email: info@thermakraft.co.nz
Web: www.thermakraft.co.nz

CERTIFICATION BODY



BRANZ

BRANZ Limited

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

Tel: 04 237 1170
Email: assuranceservices@branz.co.nz
Web: branz.nz

Cheyldra Percy
Chief Executive Officer
BRANZ Limited

DESCRIPTION OF PRODUCT

Thermakraft Watergate Plus 295 Wall Underlay is a white coloured flexible synthetic wall underlay.

USE OF PRODUCT

Thermakraft Watergate Plus 295 Wall Underlay is for use as a flexible wall underlay for timber and steel framed buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
- with direct fixed wall claddings, or with wall claddings installed over a drained cavity; or,
- with masonry veneer in accordance with NZBC Acceptable Solution E2/AS1; and,
- situated in NZS 3604: 2011 Wind Zones up to and including Very High when fixed directly to framing, and Extra High when fixed over a rigid air barrier.

Thermakraft Watergate Plus 295 Wall Underlay is also for use:

- as an air barrier in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.4 [c]; or,
- as a non-rigid backing material for stucco plaster in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.3.5.1, or as a slip layer over a rigid backing for stucco cladding in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.3.3.1 [b].

COMPLIES WITH THE FOLLOWING PROVISIONS OF THE NEW ZEALAND BUILDING CODE (NZBC)

Clause B2 DURABILITY: Performance B2.3.1 [a], not less than 50 years [for when the cladding durability requirement is not less than 50 years], B2.3.1 [b], 15 years [for when the cladding durability requirement is 15 years] and B2.3.2 [a].

Clause C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE: Performance C3.4 [c].

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1.

SUBJECT TO THE FOLLOWING CONDITIONS AND LIMITATIONS

- Thermakraft Watergate Plus 295 Wall Underlay must not be exposed to the weather or ultra violet light for more than 60 days before being covered by the wall cladding.
- Framing studs must be at a maximum of 600 mm centres. Timber framing must be in accordance with NZS 3604: 2011 or to a specific design. Steel framing must be to a specific design.

The Certificate Holder must maintain compliance with the conditions set out in Regulation 15 of the Building [Product Certification] Regulations 2008.



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REFERENCE DOCUMENTS

This Product Certificate must be read in conjunction with:

- BRANZ Appraisal No. 695 (2017) Thermakraft Watergate Plus 295 Wall Underlay.
- Technical Literature: Thermakraft Watergate Plus 295, Issue 2, dated October 2018.
- Technical Literature: Thermakraft Wall Underlay Installation Procedures, Issue 2, dated November 2018.

APPENDIX A - PRODUCT TECHNICAL DATA

A1: TYPE AND INTENDED USE OF PRODUCT

Thermakraft Watergate Plus 295 Wall Underlay is for use as a flexible wall underlay fixed over timber or steel framed walls to limit the entry of wind into building cavities, and to act as a secondary barrier to wind-driven rain.

Thermakraft Watergate Plus 295 Wall Underlay is suitable for use under wall claddings as a wall underlay as called up in NZBC Acceptable Solution E2/AS1, Table 23 on timber framed buildings, including non-absorbent wall claddings such as vinyl and metal-based weatherboards in direct fixed situations. Thermakraft Watergate Plus 295 Wall Underlay is suitable for use under cavity-based wall claddings as an absorbent synthetic wall underlay as called up in NZS 2295: 2006, Table 2.4 on steel framed buildings.

A2: PRODUCT SPECIFICATION

Thermakraft Watergate Plus 295 Wall Underlay is a synthetic building underlay manufactured from film coated, non-woven, laminated flexible synthetic fabric. Thermakraft Watergate Plus 295 Wall Underlay is coloured white on the top and bottom faces and is printed with the Watergate Plus 295 logo repeated along the length of the roll.

The product is supplied in rolls 1.370 m wide x 18.5 m, 37.0 m and 73.0 m long; 2.740 m wide x 18.5 m and 36.5 m long and 3.0 m wide x 22.4m long. The rolls are wrapped in clear polythene film.



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A3: PRODUCT SPECIFICATION

TABLE 1: NZBC E2/AS1 TABLE 23 (NZS 2295:2006) REQUIREMENTS

NZBC E2/AS1 Table 23 (NZS 2295: 2006) Wall Underlay Properties	Property Performance Requirement	Actual Property Performance
Vapour Resistance	≤ 7 MN s/g	Pass
Absorbency	≥ 100 g/m ²	Pass
Water Resistance	≥ 20 mm	Pass
pH of Extract	≥ 6.0 and ≤ 9.0	Pass
Shrinkage	≤ 0.5%	Pass
Mechanical	Edge tear and tensile strength	Edge tear [Average]: Machine direction = 75 N 1 Cross direction = 56 N [Pass] Tensile strength [Average]: Machine direction = 2.2 kN/m [Pass] Cross direction = 1.6 kN/m [Pass]
Air Barrier	Air resistance: ≥ 0.1 MN s/m ³	Pass. Thermakraft Watergate Plus 295 Wall Underlay is suitable for use as an air barrier.

Note 1: Pass of BRANZ criteria for edge tear resistance.

A4 INSTALLATION REQUIREMENTS

Installation must be carried out in accordance with the following:

- Technical Literature: Thermakraft Watergate Plus, Issue 2, dated October 2018; and,
- Technical Literature: Thermakraft Wall Underlay Installation Procedures, Issue 2 dated November 2018; and,
- NZBC Acceptable Solution E2/AS1.



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APPENDIX B - OTHER RELEVANT TECHNICAL DATA

B1 STRUCTURE

Thermakraft Watergate Plus 295 Wall Underlay is suitable for use in all Wind Zones of NZS 3604: 2011 up to, and including, Very High when used as a stand-alone flexible wall underlay, and all Wind Zones of NZS 3604: 2011 up to, and including, Extra High when used as an overlay for rigid building underlays.

B2 DURABILITY

Thermakraft Watergate Plus 295 Wall Underlay meets code compliance with NZBC Clause B2.3.1 [a], not less than 50 years for building underlays used where the cladding durability requirement or expected serviceable life is not less than 50 years, e.g. behind masonry veneer, and code compliance with NZBC Clause B2.3.1 [b], 15 years for building underlays used where the cladding durability requirement is 15 years. Thermakraft Watergate Plus 295 Wall Underlay is expected to have a serviceable life equal to that of the cladding.

B3 CONTROL OF INTERNAL FIRE AND SMOKE SPREAD

Thermakraft Watergate Plus 295 Wall Underlay has an AS 1530 - 1993 Part 2 flammability index of not greater than 5 and therefore meets the requirements of NZBC Acceptable Solutions C/AS2 to C/AS6, Paragraph 4.17.8 b) for suspended flexible fabric used as an underlay to exterior cladding that is exposed to view in occupied spaces. It may therefore be used with no restrictions in all buildings.

B4 PREVENTION OF FIRE OCCURRING

Separation or protection must be provided to Thermakraft Watergate Plus 295 Wall Underlay from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 - C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

APPENDIX C - BASIS OF CODEMARK CERTIFICATION

The following tests have been carried out on Thermakraft Watergate Plus 295 Wall Underlay in accordance with NZBC Acceptable Solution E2/AS1, Table 23:

- tensile strength, edge-tear resistance and resistance to water vapour transmission in accordance with AS/NZS 4200.1: 1994
- shrinkage in accordance with AS/NZS 4201.3:1994
- resistance to water penetration in accordance with AS/NZS 4201.4: 1994
- surface water absorbency in accordance with AS/NZS 4201.6: 1994
- pH of extract in accordance with AS/NZS 1301.421s: 1998
- air resistance to BS 6538.3:1987.

Ultra-violet [UV] light ageing of wall underlays is a critical evaluation requirement to verify a products continued performance after site construction exposure. UV aging of Thermakraft Watergate Plus 295 Wall Underlay equivalent to 60 days construction site exposure was completed and the range of tests detailed above were repeated after aging.

The Flammability Index of Thermakraft Watergate Plus 295 Wall Underlay has been evaluated in accordance with AS 1530.2 - 1993.

BRANZ Expert Judgement [Materials Scientist] confirmation of compliance to the NZBC Clause B2 Durability Performance Requirements.

The practicability of installation of Thermakraft Watergate Plus 295 Wall Underlay has been assessed by BRANZ and found to be satisfactory.



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The referenced Technical Literature has been examined by BRANZ and found to be satisfactory.

The quality of supply to the market is the responsibility of Thermakraft Limited.

Building designers are responsible for the design of the building, and for the incorporation of the wall underlay into their design in accordance with the instructions of Thermakraft Limited.

Quality of installation is the responsibility of the installer in accordance with the instructions of Thermakraft Limited.

SOURCES OF INFORMATION

- AS 1530.2 – 1993 Test for flammability of materials.
- AS/NZS 1301.421s: 1998 Determination of the pH value of aqueous extracts of paper, board and pulp – cold extraction method.
- AS/NZS 4200.1: 1994 Pliable building membranes and underlays – materials.
- AS/NZS 4201.1: 1994 Pliable building membranes and underlays – Methods of test – Resistance to dry delamination.
- AS/NZS 4201.2: 1994 Pliable building membranes and underlays – Methods of test – Resistance to wet delamination.
- AS/NZS 4201.3: 1994 Pliable building membranes and underlays – Methods of test – Shrinkage.
- AS/NZS 4201.4: 1994 Pliable building membranes and underlays – Methods of test – Resistance to water penetration.
- AS/NZS 4201.6: 1994 Pliable building membranes and underlays – Methods of test – Surface water absorbency.
- ASTM D882:2012 Standard test method for tensile properties of thin plastic sheeting.
- ASTM E96/E96M:2016 Standard test methods for water vapor transmission of materials.
- ASTM G155:2013 Standard practice for operating xenon arc light apparatus for exposure of non-metallic underlays.
- BS 6538.3: 1987 Method for determination of air permeance using the Garley apparatus.
- NZS 2295: 2006 Pliable, permeable building underlays.
- NZS 3604: 2011 Timber-framed buildings.
- TAPPI T470:1986 Edge tearing resistance of paper [Edge-tear stirrup method]
- Acceptable Solutions and Verification Methods for New Zealand Building Code External Moisture Clause E2, Ministry of Business, Innovation and Employment, Third Edition July 2005 [Amendment 8, 30 November 2018].
- Acceptable Solutions and Verification Methods for New Zealand Building Code Protection from Fire Clauses C1-C6, Ministry of Business, Innovation and Employment, First Edition April 2002 [Amendment 4, 1 January 2017]
- Ministry of Business, Innovation and Employment Record of Amendments for Compliance Documents and Handbooks.
- The Building Regulations 1992.



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