



Certificate of Conformity

Certificate number: CM-80000

CERTIFICATION BODY:



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CERTIFICATE HOLDER:



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THIS TO CERTIFY THAT



Thermakraft 290 Intelligent House Wrap

Type and/or use of product:

Thermakraft 290 Intelligent House Wrap is for use as a wall sarking on buildings within the following scope:

- Class 1 and Class 10 buildings; and,
- Class 2 to Class 9 buildings; and,
- constructed with timber or steel framing; and,
- with masonry veneer; and,
- with absorbent and non-absorbent wall claddings directly fixed to framing; and,
- with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; and,
- situated in non-cyclonic wind zones up to, and including N3.

Description of Product:

Thermakraft 290 Intelligent House Wrap is a flexible synthetic wall sarking. The product consists of a micro-porous water-resistant film ultrasonically bonded to a layer of non-woven spun-bonded polyolefin, and is coloured white. The product is printed with the Thermakraft 290 logo repeated along the length of the roll.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S)

BCA 2016

Performance Requirement(s):

Volume One

FP1.4 (a)(b)

Damp and Weatherproofing

GP5.1 (a)(b)

Construction in Bushfire Prone Areas

F1.6

Sarking

Deemed-to-Satisfy Provision(s):

G5.2 (a)(b);
AS 3959 Section 3.10
Sarking

Protection

State or territory variation(s):

GP5.1 (a)(b)

Construction in Bushfire Prone Areas:
NSW, QLD and TAS

G5.2 (a)(b)

Protection: NSW and SA

Volume Two

P2.2.2 (a)(b) Weatherproofing

P2.3.4 (a)(b) Bushfire Areas

P2.3.4 (a)(b) Bushfire Areas: TAS

Date of issue: 19 February 2018

Date of expiry: 19 February 2021

Chelydra Percy - BRANZ Limited

Livi Krevatin - Unrestricted Building Certifier



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SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B

Limitations and conditions:

- a. Thermakraft 290 Intelligent House Wrap must not be exposed to the weather or ultra violet light for a total of more than 42 days before being covered by the wall cladding.
- b. Thermakraft 290 Intelligent House Wrap has an AS 1530 Part 2 flammability index of less than 5 and therefore has a flammability index classification of low in accordance with AS/NZS 4200.1. This satisfies the requirements for wall sarking where specified in Bushfire Prone Areas.
- c. The sarking provides a degree of temporary weather protection during early construction. However, the product will not make the building weathertight and some wetting of the underlying structure is always possible before the building is closed in. Hence, the building must be closed-in and made weatherproof before moisture sensitive materials such as wall or ceiling linings and insulation materials are installed.
- d. Handling and storage of the product, whether on or off site, is under the control of the installer. The rolls must be protected from damage and weather. They must be stored on end, under cover, in clean, dry conditions and must not be crushed.

Building Classification/s:

Class 1,2,3,4,5,6,7,8,9 and 10.

Scope of certification: The CodeMark Scheme is a building product certification scheme. The rules of the Scheme are available at the ABCB website www.abcb.gov.au. This Certificate of Conformity is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed against have been met. The responsibility for the product performance and its fitness for the intended use remain with the certificate holder.

Disclaimer: The Scheme Owner, Scheme Administrator and Scheme Accreditation Body do not make any representations, warranties or guarantees, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; and the Scheme Owner, Scheme Administrator and Scheme Accreditation Body disclaim to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this certificate.

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

Thermakraft 290 Intelligent House Wrap is intended for use as an alternative to conventional wall sarkings, which are fixed over timber or steel framed walls in order to limit the entry of wind into building cavities, and to act as a secondary barrier to wind-driven rain.

A2 Description of product

As per page 1.

A3 Product specification

- a. Thermakraft 290 Intelligent House Wrap is a synthetic building sarking for use under wall claddings. The product consists of a micro-porous water-resistant film ultrasonically laminated to a layer of non-woven polyolefin. Thermakraft 290 Intelligent House Wrap is coloured white on the top and bottom faces.
- b. The product is supplied in rolls 1.370 m wide x 37.0 m and 73.0 m long, and 2.740 m wide x 18 m and 36.5 m long. The product is printed with the Thermakraft 290 logo repeated along the length of the roll. The rolls are wrapped in clear polythene film.
- c. Accessories used with Thermakraft 290 Intelligent House Wrap which are supplied by the installer are:
 - Fixings – staples, clouts, screws or proprietary sarking fixings, or other temporary fixings to attach the wall sarking to the framing.
 - Wall sarking support – polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens where required to support the wall sarking.
- d. Thermakraft 290 Intelligent House Wrap is deemed to be a satisfactory sarking material for the waterproofing of walls in accordance with BCA Volume 1, Paragraph F1.6. Refer to Table 1.

Table 1: Thermakraft 290 Intelligent House Wrap Material Properties

AS/NZS 4200.1 Properties	Property Performance Requirement	Actual Property Performance	AS/NZS 4200.1 Classification
Shrinkage	≤ 0.5%	Pass	Not Applicable
Absorbency	≥ 100 g/m ²	Pass	High
Vapour Barrier	≤ 7 MN s/g	Pass	Low
Water Barrier	≥ 100 mm	Pass	High
Emittance			Non-reflective
Duty Classification	Edge tear resistance: ≥ 45 N Burst strength: ≥ 200 N in accordance with AS 2001.2.19	Pass	Light Wall
Flammability	≤ 5	Pass	Low



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A4 Manufacturer and manufacturing plant(s)

Thermakraft Limited
11 Turin Place
East Tamaki
Auckland
New Zealand

A5 Installation requirements

- a. Installation must always be carried out in accordance with the Thermakraft 290 Intelligent House Wrap Technical Literature and this Certificate, by competent tradespersons with an understanding of wall sarking installation.
- b. Thermakraft 290 Intelligent House Wrap must be fixed to all framing members at maximum 300 mm centres with large-head clouts 20 mm long, 6-8 mm staples, self-drilling screws or proprietary sarking fixings. The sarking must be pulled taut over the framing before fixing.
- c. Thermakraft 290 Intelligent House Wrap must be run horizontally and must extend from the upper-side of the top plate to the under-side of the bearers or wall plates supporting ground floor joists, or below bottom plates on concrete slabs. Horizontal laps must be no less than 150 mm wide, with the direction of the lap ensuring that water is shed to the outer face of the sarking. End laps must be made over framing and be no less than 150 mm wide.
- d. The wall sarking should be run over openings and these left covered until windows and doors are ready to be installed. Openings are formed in the sarking by cutting on a 45 degree diagonal from each corner of the penetration. The flaps of the cut sarking must be folded inside the opening and stapled to the penetration framing. Excess sarking may be cut off flush with the internal face of the wall frame.
- e. In masonry veneer installations and wall cladding installations over a cavity, where the studs or cavity battens are installed at greater than 450 mm centres, the sarking must be supported to prevent it bulging into the cavity space when bulk insulation is installed in the wall frame cavity. Where the sarking needs to be supported, polypropylene strap or galvanised wire must be installed horizontally over the sarking at 300 mm centres. Alternatively, 75 mm galvanised wire mesh can be installed over the entire sarking surface.
- f. Thermakraft 290 Intelligent House Wrap can be added as a second layer over window and door joinery head flashings.
- g. When used behind masonry veneer cladding, the brick ties must be fixed to the face of the stud only.
- h. When fixing the product in windy conditions, care must be taken due to the large sail area created by the wide roll widths.
- i. Any damaged areas of Thermakraft 290 Intelligent House Wrap, such as tears, holes or gaps around service penetrations, must be repaired. Damaged areas can be repaired by covering with new material lapping the damaged area by at least 150 mm and taping, or by taping small tears.

A6 Other relevant technical data

Technical Literature

- a. The Technical Literature for Thermakraft 290 Intelligent House Wrap entitled 'Thermakraft 290 – The Intelligent House Wrap' Issue 2, February 2018, must be read in conjunction with this Certificate. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Certificate must be followed.

Structure

- b. Thermakraft 290 Intelligent House Wrap is suitable for use on buildings situated in non-cyclonic wind zones up to, and including N3.

Durability - Serviceable Life

- c. Provided it is not exposed to the weather or ultra-violet light for a total of more than 42 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, Thermakraft 290 Intelligent House Wrap is expected to have a serviceable life equal to that of other sarking.

Flammability

- d. Thermakraft 290 Intelligent House Wrap has an AS 1530 Part 2 flammability index of less than 5 and therefore has a flammability index classification of low in accordance with AS/NZS 4200.1.

Heating Appliances, Fireplaces, Chimneys and Flues

e. Thermakraft 290 Intelligent House Wrap must be separated from fireplaces, heating appliances, flues and chimneys in accordance with the requirements of the BCA for the protection of combustible materials.

Fire Safety - Bush Fire Areas

f. Australian Standard AS 3959 is cited as a means of demonstrating compliance for Bushfire Prone Areas. The standard specifies in Clause 3.10 that where sarking is required that it shall have a flammability index of not more than 5. Thermakraft 290 Intelligent House Wrap meets this requirement.

Damp and Weatherproofing

g. Wall claddings installed over Thermakraft 290 Intelligent House Wrap must meet the performance requirements of the BCA, e.g. Deemed to Satisfy wall claddings covered by the BCA.

h. Thermakraft 290 Intelligent House Wrap, when installed in accordance with the Technical Literature and this Certificate will assist in the total cladding systems compliance with the Damp and Weatherproofing performance clauses of the BCA.

Responsibilities

i. The quality of supply to the market is the responsibility of Thermakraft Australia Pty Ltd.

j. Building designers are responsible for the design of the building, and for the incorporation of the wall sarking into their design in accordance with the instructions of Thermakraft Australia Pty Ltd.

k. Quality of installation is the responsibility of the installer in accordance with the instructions of Thermakraft Australia Pty Ltd.

Sources of Information

- AS 1530.2 – 1993 Test for flammability of materials.
- AS 2001.2.19 – 1998 (R2016) Methods of test for textiles Physical tests – Determination of bursting force of textile fabrics – Ball burst method.
- AS 3959 – 2009 Construction of buildings in bushfire-prone areas.
- AS/NZS 4200.1: 1994 Pliable building membranes and sarkings – materials.
- AS/NZS 4200.1: 2017 Pliable building membranes and underlays.
- AS/NZS 4201.3: 1994 Pliable building membranes and sarkings – Methods of test – Shrinkage.
- AS/NZS 4201.4: 1994 Pliable building membranes and sarkings – Methods of test – Resistance to water penetration.
- AS/NZS 4201.6: 1994 Pliable building membranes and sarkings – Methods of test – Surface water absorbency.
- National Construction Code Series, Building Code of Australia 2016, Australian Building Codes Board.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

- a. The following tests have been carried out on Thermakraft 290 Intelligent House Wrap in accordance with AS/NZS 4200.1: tensile strength, edge-tear resistance and resistance to water vapour transmission in accordance with AS/NZS 4200.1, shrinkage in accordance with AS/NZS 4201.3, resistance to water penetration in accordance with AS/NZS 4201.4, surface water absorbency in accordance with AS/NZS 4201.6, and burst strength in accordance with AS 2001.2.19. Ultra-violet (UV) light aging of wall underlays is a critical evaluation requirement to verify a products continued performance after site construction exposure. UV aging of Thermakraft 290 Intelligent House Wrap was completed by BRANZ and a range of the tests detailed previously were repeated after aging. BRANZ criteria to confirm a 42 day site construction exposure period is as follows:
- QUV accelerated weathering with UVA lamps following ASTM G154 for a total exposure time of 500 hours, or
 - Xenon arc accelerated weathering following ASTM G155 for a total exposure time of 200 hours, or
 - >1550 MJ/m² of natural solar radiation.
- b. The Flammability Index of Thermakraft 290 Intelligent House Wrap has been evaluated in accordance with AS 1530.2.
- c. An assessment of durability has undertaken by BRANZ technical experts.
- d. The practicability of installation of Thermakraft 290 Intelligent House Wrap has been assessed by BRANZ and found to be satisfactory.
- e. The Technical Literature, including installation instructions, has been examined by BRANZ and found to be satisfactory.
- f. The manufacture of Thermakraft 290 Intelligent House Wrap has been evaluated by BRANZ, including methods adopted for quality control. Details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.

B2 Reports

- a. BRANZ Appraisal No. 914 (2016) Thermakraft 290 Intelligent House Wrap, Date of Issue 28 July 2016, including Amendment No. 2, dated 18 August 2017.