



Certificate of Conformity



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Certificate Holder:
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Certificate number: CM30005 Rev11

THIS TO CERTIFY THAT

NRG Greenboard™ Insulated Wall Cladding System

Type and/or use of product:

NRG Greenboard™ Insulated Wall Cladding System is an External Wall Cladding System with thermal Insulation properties.

Description of product:

NRG Greenboard™ Insulated Wall Cladding System is made of:

- Expanded polystyrene: 40, 50, 60, 75 or 100mm thick complying with Class M of AS 1366.3–1992 (incorporating Amendment No.1), which contains Bifenthrin
- Fixed to stud framing by screws and PVC washers
- PVC beading (UV stabilized)
- 5 x 5 mm alkali resistant fibreglass mesh reinforcement
- Polymer modified render system to NRG Render Specification
- Acrylic based texture membrane coating

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

BCA 2016

	Volume One		Volume Two	
Performance Requirement(s)	BP1.1 (a), (b) (i), (ii), (iii), (iv), (viii), (x),	Structural reliability	P2.1.1 (a), (b) (i), (ii), (iii), (iv), (viii), (x),	Structural stability and resistance to actions

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. The certification is not transferrable to a manufacturer not listed on Appendix A of this certificate.

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.

The purpose of Global-Mark **construction site audits** is to confirm the practicability of installing the product; and to confirm the appropriateness and accuracy of installation instructions

In placing the **CodeMark mark** on the product/system, the certificate holder makes a declaration of compliance with the certification standard(s) and confirms that the product is identical to the product certified herein. In issuing this Certificate of Approval Global-Mark has relied on the **expertise of external bodies** (laboratories, and technical experts).

 Herve Michoux, Global-Mark Managing Director	 Peter Gardner, Unrestricted Building Certifier	Date of issue:	13/05/2010	
		Date of expiry:	13/05/2019	
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		(xi), (xii)		(xi), (xii), (c)	
		BP1.2	Structural resistance		
		FP1.4	Weatherproofing	P2.2.2	Weatherproofing
		FP1.5	Rising damp	P2.2.3	Rising damp
Deemed-to-Satisfy Provision(s):		Spec A2.4	Fire Hazard Properties		
		G5.2	Construction in Bushfire Prone Areas – Protection To BAL-29	3.7.4	Bushfire Areas To BAL-29
		J1.2	Thermal construction – general	3.12.1.1	Building fabric thermal insulation
		J1.5	Walls	3.12.1.4	External walls
State or territory variation(s):		SA FP1.5	Rising damp	SA P2.2.3	Dampness
		NSW G5.2	Construction in Bushfire Prone Areas – Protection	NSW P2.2.3	Dampness
		SA G5.2	Construction in Bushfire Prone Areas – Protection	Vic P2.6	Energy Efficiency - Building
		NSW Section J	Energy Efficiency	NSW 3.7.4.0	Bushfire Areas – Acceptable construction manuals
		NT Section J	Energy Efficiency	Qld 3.7.4.0	Bushfire Areas – Acceptable construction manuals
		Qld Section J	Energy Efficiency	SA 3.7.4.0	Bushfire Areas – Acceptable construction manuals
				SA 3.7.4.1 SA 3.7.4.2 SA 3.7.4.3	Bushfire Areas – Acceptable construction manuals
				Tas 3.7.4.0	Bushfire Areas – Acceptable construction manuals
				NSW 3.12	Energy Efficiency
				NT 3.12	Energy Efficiency



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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:

1. Compliance with the above BCA Provisions is subject to design and construction being carried out in accordance with the NRG Greenboard™ Insulated Wall Cladding Specifications and Installation Manual (May 2017, 10th Edition) and the following requirements:
 - a. Wall thermal insulation performance shall be determined using the insulation values for NRG Greenboard specified in Table 1.
 - b. Fastener spacings shall not exceed the specified maximum spacing for the site wind class as per Table 2, Table 3, Table 4, Table 5.
 - c. Damp-proof courses complying with AS/NZS 2904:1995 (incorporating Amendment No.1 and Amendment No.2) shall be provided and the product installed above the finished ground or paving level.
 - d. In bushfire areas, construction shall also be carried out in accordance with the relevant requirements of AS 3959-2009 (incorporating Amendment No.1, Amendment No.2 and Amendment No.3) for bushfire attack levels up to BAL-29.
 - e. Where NRG Greenboard™ is installed, electrical installations must comply with AS/NZS 3000:2007 (incorporating Amendment No.1 and Amendment No.2).
2. Excludes compliance with NCC 2016 Volume One Section C: compliance for non-combustibility, fire hazard properties when used as a wall lining, fire hazard properties when used as a composite member (eg. insulation within a wall), fire hazard properties generally, and regarding fire resistance or fire resistance levels.
3. Excludes compliance NCC 2016 Volume Two Part 3.7: compliance for non-combustibility and regarding fire resistance or fire resistance levels (FRL).

Building classification/s:

1,2,3,4,5,6,7,8,9,10



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APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

See “Type and/or use of product “on page 1.

A2 Description of product

See “Description of product:” on page1

The cladding system is fixed to a stud frame, incorporating a reflective or non-reflective cavity and plasterboard lining.

A3 Product specification

Refer to NRG Greenboard™ Specification 10th Edition (May 2017).

A4 Manufacturer and manufacturing plant(s)

3/13-15 Octal St Yatala, QLD 4207

8/31 Lundberg Drive, Murwillumbah, NSW 2484

A5 Installation requirements

Product installation shall be carried out in accordance with the NRG Greenboard™ Insulated Wall Cladding Specifications and Installation Manual (May 2017, 10th Edition) by an NRG trained and competent person (having received the NRG Greenboard™ Certificate of Competence) under the direction of a Builder.

An Application for NRG CodeMark Certification Form shall be completed and signed by the Supplier, Builder and Installer. This form must be signed by the Builder, and submitted to NRG, with the copy issued to the owner.

Fixing of NRG Greenboard™ to framing shall be in accordance with Tables 2 to 5.

A6 Other relevant technical data

In accordance with NCC Volume One Specification A2.4, NRG Greenboard achieves the following fire hazard properties (as an insulation material), tested in accordance with AS/NZS 1530.3:1999:

Ignitability Index -	6
Spread of Flame Index -	0
Heat Evolved Index -	1
Smoke Developed Index -	4



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Thermal insulation for use in walls (assessed based on ASTM C518-04, referenced in AS/NZS 4859.1:2002 (incorporating Amendment No.1)).

The thermal resistances in Table 1 are of the NRG Greenboard™ insulation alone (i.e. corresponding to “added insulation” as used in the NCC). The total thermal resistance of a wall system is the sum of values for the external air film (0.04), external cladding, air space or cavity (if applicable), NRG Greenboard™ insulation (from Table 1), internal cladding, and internal air space (0.12).

The calculated thermal resistance values do not account for thermal bridging at studs and the like.

Table 1: Thermal Resistance

NRG Greenboard Thickness (mm)	Thermal Resistance (m ² .K/W)	Equivalent R rating
40	1.03	1.03
50	1.28	1.28
60	1.54	1.54
75	1.93	1.93
100	2.57	2.57



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Table 2: NRG Greenboard™ Cladding Fixing Requirements – General Areas

40mm NRG Greenboard™ Cladding			50-60mm NRG Greenboard™ Cladding			75-100mm NRG Greenboard™ Cladding		
Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)
N1	450	300	N1	450	300	N1	450	300
N2	450	300	N2	450	300	N2	450	300
N3	450	300	N3	450	300	N3	450	300
N4	450	300	N4	450	300	N4	450	300
N5	450	200	N5	450	200	N5	450	275
C1	450	300	C1	450	300	C1	450	300
C2	450	200	C2	450	200	C2	450	250
C3	450	130	C3	450	130	C3	450	175
C4	450	90	C4	450	90	C4	450	115

Table 3: NRG Greenboard™ Cladding Fixing Requirements – General Areas

40mm NRG Greenboard™ Cladding			50-60mm NRG Greenboard™ Cladding			75-100mm NRG Greenboard™ Cladding		
Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)
N1	600	300	N1	600	300	N1	600	300
N2	600	300	N2	600	300	N2	600	300
N3	600	250	N3	600	250	N3	600	250
N4	600	225	N4	600	225	,	600	225
N5	600	150	N5	600	150	N5	600	200
C1	600	250	C1	600	250	C1	600	250
C2	600	150	C2	600	150	C2	600	250
C3	600	95	C3	600	95	C3	600	130
C4	600	65	C4	600	65	C4	600	85



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Table 4: NRG Greenboard™ Cladding Fixing Requirements – Within 1,200 mm of Edges

40mm NRG Greenboard™ Cladding			50-60mm NRG Greenboard™ Cladding			75-100mm NRG Greenboard™ Cladding		
Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)
N1	450	300	N1	450	300	N1	450	300
N2	450	300	N2	450	300	N2	450	300
N3	450	250	N3	450	250	N3	450	300
N4	450	225	N4	450	225	N4	450	230
N5	450	150	N5	450	150	N5	450	160
C1	450	250	C1	450	250	C1	450	240
C2	450	150	C2	450	150	C2	450	160
C3	450	95	C3	450	95	C3	450	100
C4	450	65	C4	450	65	C4	450	70

Table 5: NRG Greenboard™ Cladding Fixing Requirements – Within 1,200 mm of Edges

40mm NRG Greenboard™ Cladding			50-60mm NRG Greenboard™ Cladding			75-100mm NRG Greenboard™ Cladding		
Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)
N1	600	250	N1	600	250	N1	600	250
N2	600	225	N2	600	225	N2	600	225
N3	600	210	N3	600	210	N3	600	210
N4	600	140	N4	600	140	N4	600	170
N5	600	90	N5	600	90	N5	600	120
C1	600	140	C1	600	140	C1	600	160
C2	600	90	C2	600	90	C2	600	120
C3	600	60	C3	600	60	C3	600	75
C4	600	45	C4	600	45	C4	600	50



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APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

Structure – The following assessment methods have been used for NCC Volume One BP1.1 and BP1.2, and NCC Volume Two P2.1.1 (a), (b) and (c):

- A0.5(a) / 1.0.5(a) evidence of suitability in accordance with A2.2 (a) (i) / 1.2.2 (a) (i) reports from Registered Testing Authorities as specified in B2 item 3 and item 8.
- A0.5(a) / 1.0.5(a) evidence of suitability in accordance with A2.2 (a) (iii) / 1.2.2 (a) (iii) certificates from a Professional Engineer: Ron Bell, Summermore Pty Ltd as specified in B2 items 9, 10, 11, 12 and 13.

Waterproofing/Weatherproofing – The following assessment methods have been used for NCC Volume One FP1.4 and NCC Volume Two P2.2.2:

- 1.0.5(d) comparison with the Deemed-to-Satisfy Provisions in Volume Two Part 3.5.3.
- A0.5(a) / 1.0.5(a) in accordance with A2.2 (a) (iii) / 1.2.2 (a) (iii) certificates from a Professional Engineer: Ron Bell, Summermore Pty Ltd, as specified in B2 item 9 and item 11.

Rising Damp – The following assessment methods have been used for NCC Volume One FP1.5 and NCC Volume Two P2.2.3:

- A0.5(d) / 1.0.5(d) comparison with the Deemed-to-Satisfy Provisions in Volume One F1.9 and F1.10, and in Volume Two Part 3.4.
- A0.5(a) / 1.0.5(a) in accordance with A2.2 (a) (iii) / 1.2.2 (a) (iii) certificates from a Professional Engineer: Ron Bell, Summermore Pty Ltd, as specified in B2 item 9 and item 11.

Energy Use / Energy Efficiency – The following assessment method has been used for Volume One J1.2 and J1.5, and Volume Two 3.12.1.1 and 3.12.1.4:

- A0.5(a) / 1.0.5(a) evidence of suitability in accordance with A2.2 (a) (i) / 1.2.2 (a) (i) reports from Registered Testing Authorities as specified in B2 item 4.

Fire Hazard Properties and Construction in Bushfire Prone Areas – The following assessment method has been used for Volume One Spec A2.4 and G5.2, and Volume Two 3.7.4:

- A0.5(a) / 1.0.5(a) evidence of suitability in accordance with A2.2 (a) (i) / 1.2.2 (a) (i) reports from Registered Testing Authorities as specified in B2 items 1, 2, 5, 6 and 7.

B2 Reports

1. Australian Wool Testing Authority (AWTA) Product Testing – Test Report Number: 7-566170-CQ, AS/NZS 1530.3:1999, “Simultaneous determination of Ignitability, Flame Propagation, Heat Release and Smoke Release”, 4/5/2009
2. Australian Wool Testing Authority (AWTA) Product Testing – Test Report Number: 7-586446-CQ, AS/NZS 3837:1998, “Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter”, 8/8/2012



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3. BRANZ – Report No.: DC 1869, “Testing of NRG Building Systems Pty Ltd EPS Specimens”, 22/2/2010
4. BRANZ – Report No.: DI 0031/01, “Thermal Resistance of an Insulation Sample”, 22/4/2009
5. Exova Warringtonfire – EWFA Report No.: 2581501.1 “Full scale bushfire external wall test of a framed wall system in accordance with AS1530.8.1-2007”, Test Date: 31/5/2011
6. Exova Warringtonfire – EWFA Report No.: 26733-04 “The bushfire resistance performance of a framed wall system if tested in accordance with AS1530.8.1-2007 as appropriate for external walls”, Issue Date: 30/4/2017, Expiry Date: 30/4/2022
7. Exova Warringtonfire – EWFA Certificate of Assessment, Certificate No.: SFC 26733-04, 30/4/2017 (valid until 30/4/2022)
8. Structural Testing Services (STS) – Test ID #: STS-10-258-P “Screw Pullout Test Report”, 3/12/2010
9. SUMMERMORE Pty Ltd – “NRG Greenboard Cladding”, 3/11/2011
10. SUMMERMORE Pty Ltd – “Report on Impact Testing of NRG Board”, 16/3/2012
11. SUMMERMORE Pty Ltd – “Report on NRG Greenboard™ Evidence of Suitability”, 29/4/2012
12. SUMMERMORE Pty Ltd – “Report on Bending Testing of NRG Green Board Cladding”, 12/11/2012
13. SUMMERMORE Pty Ltd – “Report on NRG Greenboard™ Cladding Fixing Requirements 17-12560”, 4/3/2017

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