BEAL Appraisal Certificate

APPRAISAL #: C2439

EXPIRY DATE: 30 September 2027

The Magnum Board 16mm Bevel-back Weatherboard System



MAGNUM® BOARD

1. Product

1.1 Description

Magnum Board 16mm Weather Board is a 16mm thick, high density, fibre reinforced Magnesium Oxide (MgO) product used as cladding for building classifications 1 to 10a.

It is supplied as 3.6m long, 180mm wide bevel back boards, produced from 16mm thick MgO material. Each board comes with a sanded back face and a smooth front face ready for application of a paint coating system specified in HBB Technical Document # 044AU.

Magnum Board 16mm Weather Board is intended for use as an exterior cladding product for installation over timber or steel framing using either a direct or cavity fixed methodology.

1.2 Distribution and sales

Magnum Board 16mm Weather Board is shipped to Australia direct from the manufacturer and stored in HBB warehouses in readiness for delivery to regional distributors or direct to building sites.

1.3 Components and accessories

Details and photographs of recommended tools, approved fasteners and compatible products are provided in HBB Technical Document # 044AU.

Components approved for use with Magnum Board 16mm Weather Board are:

- Stainless steel screws or nails for timber framing
- Stainless steel screws for steel framing
- Mapei Mapeflex PU45 adhesive

1.4 Accessories for use during the installation of Magnum Board 16mm Weather Board include off the shelf components such as PVC starter strips, trim, mouldings, flashings, soakers and soffit linings. Accessories are identified and details for their use are provided in HBB Technical Document # 044AU, and in a pdf set of drawings available from the HBB website.

Accessory components are available from building material supply outlets.

2. Building Code & Performance requirements

2.1 NCC 2022, BCA Volumes One and Two

2.1.1 NCC 2022 Volume One

Performance Requirements	B1P1 (2) (a), (c) F3P1 G5P1	Structural reliability - Permanent and wind actions Weatherproofing Bushfire resistance
Deemed to Satisfy Provisions	N/A	
State or Territory Variations	N/A	

Applicant:

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The most up to date version of this BEAL Appraisal Certificate can be viewed at www.beal.co.nz
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2.1.2 NCC 2022 Volume Two

Performance Requirements	H1P1 (2) (a), (c) H2P2 H7P5	Structural reliability - Permanent and wind actions Weatherproofing Bushfire resistance
Deemed to Satisfy Provisions	H1D7 (4) (b)	Wall cladding boards
State or Territory Variations	H7P5	Tasmania

2.1.3 Building classifications 1,2,3,4,5,6,7,8,9, 10a

3. Scope of Use

3.1 For exterior use on buildings in classifications 1 to 10a.
3.2 For use over new or existing timber framing that complies with AS 1684-2010 SAA National Timber Framing Code.
3.3 For use over new or existing light gauge steel framing that complies with NASH Standard for Residential and Low-Rise Steel Framing Part 1 and Part 2.
3.4 To be installed over either rigid air barrier / non rigid air barrier systems, or cavity / non-cavity systems installed in compliance with the NCC.

4. Limitations & conditions

4.1 The approved and specified components listed in Section 1.3, must be used when installing Magnum Board 16mm Weather Board.
4.2 The accessory components listed in Section 1.4 must be used as detailed in drawings provided by HBB.
4.3 Magnum Board 16mm Weather Board has not been assessed for load bearing properties or use as a bracing material.
4.4 Prior to installation, Magnum Board 16mm Weather Board must be stored in accordance with the requirements in HBB Technical Document # 044AU.
4.5 The designer, specifier and or installer must ensure Magnum Board 16mm Weather Board is appropriate for the intended application and the timber or steel framing is adequate for installation of the product.
4.6 Magnum Board 16mm Weather Board should not be exposed to sun or rain for more than 30 days without application of a paint coating system specified in HBB Technical Document # 044AU.
4.7 Installation of Magnum Board 16mm Weather Board must be carried out at temperatures below 35ºC and above 1ºC.
4.8 Although Magnum Board dust is non-hazardous, when cutting or drilling Magnum Board 16mm Weather Board, personal safety equipment must be used.
4.9 Dust must be controlled using a HEPA based extraction or vacuum system. See Sections 8.7 and 8.8 below.
4.10 This certificate is only valid for any use or installation of Magnum Board 16mm Weather Board that complies with:
- HBB Technical Document # 044AU;
- The detailed drawings available on the website;
- The conditions of this Appraisal Certificate.

5. Technical Literature

5.1 The Health Based website is: www.healthbasedbuilding.com
5.2 Magnum Board Bevel Back Weather Board Technical Document # 044AU This document sets out the design, installation details, warranty and maintenance requirements for Magnum Board 16mm Weather Board and can be accessed on the HBB website.
The current version of HBB Technical Document # 044AU is Version 3.1.
5.3 HBB is responsible for keeping the Magnum Board Bevel Back Weather Board Technical Information up to date, and notifying BEAL of any changes.
5.4 A product description sheet is available on the HBB website.
5.5 Magnum Board MSDS MBGEP-032107-5 is available on the HBB website.
5.6 The HBB Product Quality Plan (PQP) - sets out the quality management requirements for the ordering, shipping, installation, warranty and on-going monitoring of Magnum Board products.
The current version of the HBB Magnum Board PQP is Version 2.4.
5.7 The Magnum Board factory / manufacturer MQP is the quality monitoring process used to monitor raw materials, manufacturing processes and key chemical and physical properties of the Magnum Board products. Underwriters Laboratory (UL) conduct quarterly inspections and reports on factory performance as part of Magnum Board's UL Mark compliance requirements.
Warranty information and conditions of warranty Can be found in HBB Technical Document # 044AU or on the HBB website.
For a copy of this Technical Literature contact Health Based Building Limited.

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6. Technical Details

6.1 General chracteristics

Size / shape

- 3600mm x 180mm x 16mm bevel back boards with a tongue and groove end profile.

Colour Light grey with a smooth finish

Paint quality exterior face, sanded back face

Weight

- Approximately 12.5kg per 3600mm board &

Density 1,200 kg/m3

Coverage

150mm per weather board

Weather tightness

Not tested for weather tightness - however, similar 9mm and 12mm Magnum Board weather board products have been tested and performed satisfactorily at cyclic pressures up to 900 Pa. Refer Section 9.

If designed, installed and maintained in accordance with the HBB technical and quality documentation, Magnum Board 16mm Weather Board is expected to perform to the same standard as the 9mm and 12mm products.

Thermal performance

R-value - 0.13 m2.K/W

Water vapour permeability

1.0 - 4.2 g/h.m2 as per ASTM E96

Combustibility

Classified as non-combustible when tested to ASTM E136-04

Impact resistance

Meets the 12" (305mm) requirement of ASTM C1325-04

Resistance to pests

The composition of the product is not attractive to pests, however, there is no supporting test data.

7. Structural characteristics

Note: this is presented as general information and is not to be used for design purposes. Detailed design and structural information is provided in the Magnum Board Bevel Back Weather Board Technical Information - HBB Technical Document # 044AU.

7.1 Spans / spacings

To be installed to 45mm thick timber or 35mm metal studs at 450 to 600mm centres, or to 19mm thick cavity battens over timber or metal framing at 450 to 600 centres.

7.2 Wind capacity

Magnum Board 16mm Weather Board has been assessed as suitable for use in the following wind classifications:

N1 to N4, and;

C1, C2.

7.3 Bracing capacity

Magnum Board 16mm Weather Board does not provide bracing capacity.

7.4 Fasteners

Screws - Simpson Strong-Tie stainless steel #2 square drive screws are specified for use with Magnum Board 16mm Weather Board.

Fastener details for timber and steel framing are in the HBB Technical Document # 044AU.

Nails - 65 x 2.5-2.8mm stainless steel coil or cassette nails are specified for attaching Magnum Board 16mm Weather Board to timber framing.

7.5 Fixing arrangement

- Hidden screws through the top of each board for all wind zones

- Tongue and groove joints are machined into the end of each board and must be sealed with the specified sealant.

7.6 Fire resistance

Tested and categorised as Non-Combustible, Group Number 1.

Not assessed for Fire Resistance Rating (FRR)

8. Other considerations

8.1 Warehousing, ordering and dispatch

Magnum Board 16mm Weather Board is stored at a central warehouse. Orders are received electronically from the designer and or installer using an online form. Health Based Building Limited reviews and verifies the order before it is sent for picking, labelling, checking, packaging and despatch to the installer or site.

8.2 Packaging

Magnum Board® 16mm Weather Board is labelled, protected with a plastic wrapping and transported on pallets.

8.3 Delivery

Identifying marks and product codes are included with each delivery.

8.4 Handling

Magnum Board® 16mm Weather Board is transported to site on a flatbed truck and requires unloading with a forklift, or manual off-loading if a forklift is not available. Care must be taken to avoid corner damage during handling.

8.5 Storage on site:

- Lay Magnum Board® 16mm Weather Board on a solid surface and protect from dirt prior to and during installation.

- Magnum Board® 16mm Weather Board must be stored inside, in a well ventilated area up off concrete floors.

- Magnum Board® 16mm Weather Board should be kept dry and protected from sun and rain and not allowed to freeze.

- Protect the corners of Magnum Board® 16mm Weather Board prior to, and during installation.

- Do not stack other materials on top of Magnum Board® 16mm Weather Board.

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8.6 Exposure to sun and rain
- Magnum Board 16mm Weather Board must be coated within 30 days of being installed with a paint system specified in HBB Technical Document # 044AU.

8.7 Health and safety
- Magnum Board 16mm Weather Board is non-hazardous. When cutting, drilling or sanding Magnum Board 16mm Weather Board, personal safety equipment (hearing, eye and respiratory protection) must be used.

8.8 Clean up and dust control
- Dust generated during cutting, drilling or sanding Magnum Board must not be swept and should be controlled and cleaned up using a suitable HEPA based extraction or vacuum system.
- Dust and contaminants must be disposed of in accordance with local regulations or authority requirements.

9. Assessment against performance requirements

9.1 Below is a summary of the sources of information and data used in the assessment of the product against the performance requirements of the NCC.

In-service use with no reported failures
- United States, China - 17 years
- Canada, New Zealand - 7 years

9.2 Laboratory tests

Test report RAD-4224 Rev 1, Rev S1; Physical properties for acceptance criteria AC386:
- Magnum Board 16mm Weather Board
- Flexural strength, ASTM C1185
- Nail head pull-through, ASTM C1325
- Impact falling ball, ASTM C1325
- Transverse load, AC 376, ASTM E72
- Xenon arc accelerated weathering, ASTM G155
- Freeze - thaw, ASTM C1185
- Shear bond strength, ASTM C1325
- Combustibility, ASTM E136
- Vapour permeability, ASTM E96/96M

9.3 Test reports from BEAL Testing Services:
- TR140712-1 & TR140717, Weathertightness
- TR140717-1, Water resistance
- TR140716-1, Adhesion of a specified coating
- EMSL Analytical, VOC chamber testing, ASTM D5116

9.4 A resistance rating, from Jason King, Fire Engineer, dated 18 July 2014

9.5 Flame assessment report, FAR 4338, group number classification

9.6 Information provided by the manufacturer and HBB:
- Product sheet/s
- Magnum Board MSDS
- Magnum Board manufacturing process document
- Technical bulletins and notes
- HBB Technical Document # 044AU
- HBB Magnum Board PQP
- HBB MQP

9.7 Relevant information from other appraised Magnum Board products:
- Magnum Board 9mm and 12mm weather board - BEAL Appraisal C1410 (for use in NZ)
- Magnum Board 9mm Rigid air barrier - BEAL Appraisal C1405 (for use in NZ)

Peer review/s and or expert opinions

The appraisal application information supplied by the product manufacturer and HBB, and the relevant performance code requirements, has been reviewed and approved by Barrie Titheradge, Unrestricted Building Certifier.

10. Concluding statement

10.1 In the opinion of BEAL, the Magnum Board 16mm Bevel Back Weatherboard system is fit for purpose and will comply with the BCA to the extent specified provided that it is used, designed, installed and maintained as set out in this Appraisal Certificate.

The Appraisal Certificate is issued only to Health Based Building Ltd., and is valid until the date of expiry described on the front of this appraisal, subject to the conditions of this Appraisal.

11. Health Based Building Limited's responsibilities

11.1 Health Based Building must:

Notify BEAL of any changes to:

Their contact or ownership details;

Magnum Board® 16mm Weather Board product details, specifications, technical information; installation methodology, components, PQP and marketing information;

The Magnum Board® manufacturing process;

The Magnum Board factory / manufacture PQP.

Carry out periodic quality control and conformity tests as requested by BEAL.

Keep HBB Technical Document # 044AU up to date and approved by BEAL prior to public release;

Ensure the latest versions of HBB Magnum Board PQP and HBB Technical Document # 044AU are used by staff and installers;

Comply with BEAL's Terms and Conditions.

To maintain validity of their certificate Health Based Building is subject to annual audits and surveillance by BEAL of:

A building site where Magnum Board® 16mm Weather Board is being installed;

HBB Technical Document # 044AU;

The HBB Magnum Board® PQP.

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Conditions of Certification

1. This appraisal Certificate:
a) Relates only to the Magnum Board 16mm Bevel Back Weatherboard system as described herein;
b) Must be read, considered and used in full, together with the current version of the Technical Literature
c) Does not address any legislation, regulations, codes or standards, not specifically named herein;
d) Is copyright of BEAL

2. The Appraisal Certificate holder continues to meet the quality requirements of the Health Based Building Ltd. Building Product Quality Plan and has the plan audited and Appraisal certificate revalidated by BEAL on an annual basis.

3. Health Based Building Ltd. shall notify BEAL and obtain approval of any changes of the product specification or quality assurance prior to product being marketed including any trade literature, web site info or the like.

4. BEAL makes no representation as to:
a) The nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
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 the Appraisal Certificate holder.

5. BEAL's verification of the building product or system complying with one or more of the above-mentioned criteria is given on the basis that the criteria used were those that were appropriate to demonstrate compliance with the BCA at the date of this Appraisal Certificate. In the event that the criteria is withdrawn or amended at a later date, this Appraisal may no longer remain valid.

6. Any reference in this Appraisal Certificate to any other publication shall be read as a reference to the version of publication specified in this Appraisal Certificate.

Authorised Signatory

C R Prouse - Director
BEAL (Building Element Assessment Laboratory Limited)
[Revised and updated September 2025]

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