



AccreditMark Appraisal Certificate

AccreditMark

Appraisal Number: AML0014AU
Expires: 31 Dec 2021
Version: 1.1, Dec 2020

Magnum Board 16mm Weather Board

MAGNUM[®]
BOARD

Certificate Holder:
Health Based Building Limited
Address: 1062 Colombo Street, St Albans
Christchurch 8014, New Zealand
Phone: +64 3 732 8414
Web Site: www.healthbasedbuilding.com.au



1. Certificate holder

Health Based Building Limited (HBB)

2. Product name

Magnum Board 16mm Weather Board

3. Manufacturer

Magnum Board 16mm Weather Board is manufactured under the quality control systems of Magnum Building Products LLC

4. Description and intended use

4.1. 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.

4.2. Intended use

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.

4.3. 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.

Components and accessories necessary to complete an installation are to be provided by the installer. See Section 5. for details.



AccreditMark

Appraisal Number: AML0014AU

Version: 1.1 Dec 2020

AccreditMark Appraisal Certificate

MAGNUM[®]
BOARD

Magnum Board 16mm Weather Board

5. Components or accessories required for the product

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

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

- 5.1.1. Stainless steel screws or nails for timber framing
- 5.1.2. Stainless steel screws for steel framing
- 5.1.3. Mapei Mapeflux PU45 adhesive

5.2. 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.

6. Scope of use

- 6.1. For exterior use on buildings in classifications 1 to 10a.
- 6.2. For use over new or existing timber framing that complies with AS 1684-2010 SAA National Timber Framing Code.
- 6.3. 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 2.
- 6.4. To be installed over either rigid air barrier / non rigid air barrier systems, or cavity / non-cavity systems installed in compliance with the NCC.

7. Limitations and conditions

- 7.1. The approved and specified components listed in Section 5.1 must be used when installing Magnum Board 16mm Weather Board.
- 7.2. The accessory components listed in Section 5.2 must be used as detailed in drawings provided by HBB.
- 7.3. Magnum Board 16mm Weather Board has not been assessed for load bearing properties or use as a bracing material.
- 7.4. Prior to installation, Magnum Board 16mm Weather Board must be stored in accordance with the requirements in HBB Technical Document # 044AU.
- 7.5. 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.
- 7.6. 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.



AccreditMark

AccreditMark Appraisal Certificate

MAGNUM[®]
BOARD

Appraisal Number: AML0014AU

Version: 1.1 Dec 2020

Magnum Board 16mm Weather Board

- 7.7. Installation of Magnum Board 16mm Weather Board must be carried out at temperatures below 35°C and above 1°C.
- 7.8. Although Magnum Board dust is non-hazardous, when cutting or drilling Magnum Board 16mm Weather Board, personal safety equipment must be used.
- 7.9. Dust must be controlled using a HEPA based extraction or vacuum system. See Sections 13.7 and 13.8 below.
- 7.10. This certificate is only valid for any use or installation of Magnum Board 16mm Weather Board that complies with:
 - 7.10.1. HBB Technical Document # 044AU;
 - 7.10.2. The detailed drawings available on the website;
 - 7.10.3. Any conditions or requirements in this Appraisal Certificate.

8. Building code and performance requirements

8.1. NCC 2019, BCA Volumes One and Two

8.2. Complies with the following BCA provisions and State or Territory variations:

8.2.1.NCC Volume One

Performance Requirements	BP1.1 (b) (i) & (iii) FP1.4 GP5.1	Structural reliability - Permanent and wind actions Weatherproofing Bushfire resistance
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Deemed to Satisfy Provisions N/A

State or Territory Variations N/A

8.2.2.NCC Volume Two

Performance Requirements	P2.1.1 (b) (i) & (iii) P2.2.2 P2.7.5	Structural reliability - Permanent and wind actions Weatherproofing Buildings in bushfire prone areas
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Deemed to Satisfy Provisions 3.5.4.3 (a) Wall cladding boards

State or Territory Variations G3.10.5.0 Queensland omitted

8.3. Building classifications: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10a

9. Assessment against performance requirements

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.

9.1. In-service use with no reported failures

9.1.1.United States, China - 15 years

9.1.2.Canada, New Zealand - 5 years



AccreditMark

AccreditMark Appraisal Certificate

MAGNUM[®]
BOARD

Appraisal Number: AML0014AU

Version: 1.1 Dec 2020

Magnum Board 16mm Weather Board

9.2. Laboratory tests

9.2.1. Test report RAD-4224 Rev 1, Rev S1; Physical properties for acceptance criteria AC386:

- 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

9.2.2. TR140712-1 & TR140717, Weather tightness

9.2.3. TR140717-1, Water resistance

9.2.4. TR140716-2, Adhesion to various substrates

9.2.5. EMSL Analytical, VOC chamber testing, ASTM D5116

9.2.6. Jason King, Fire Engineer, fire resistance rating, 18 July 2014

9.2.7. Flame assessment report, FAR 4338, group number classification

9.3. Information provided by the manufacturer and HBB

9.3.1. Product sheet/s

9.3.2. Magnum Board MSDS

9.3.3. Magnum Board manufacturing process document

9.3.4. Laboratory test reports

9.3.5. Technical bulletins and notes

9.3.6. HBB Technical Document # 044AU

9.3.7. HBB Magnum Board PQP

9.4. Relevant information from other appraised Magnum Board products

9.4.1. Magnum Board 9mm and 12mm weather board - Beal Appraisal C1410

9.4.2. Magnum Board 9mm Rigid air barrier - Beal Appraisal C1405

9.5. Peer review/s and or expert opinions

The appraisal application information supplied by the product manufacturer and HBB, and the content of this appraisal certificate, has been reviewed and approved by Barrie Titheradge, Unrestricted Building Certifier.

10. Physical characteristics

10.1. Size / shape

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

10.2. Colour

Light grey



AccreditMark

AccreditMark Appraisal Certificate

MAGNUM[®]
BOARD

Appraisal Number: AML0014AU

Version: 1.1 Dec 2020

Magnum Board 16mm Weather Board

10.3. Finish

Smooth. Paint quality exterior face, sanded back face

10.4. Weight

Approximately 12.5kg per 3600mm board

10.5. Density

1,200 kg/m³

10.6. Coverage

150mm per weather board

10.7. 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 (Test TR140717, see Section 9.2).

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.

10.8. Thermal performance

R-value - 0.13 m².K/W

10.9. Water vapour permeability

1.0 - 4.2 g/h.m² ASTM E96

10.10. Combustibility

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

10.11. Impact resistance

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

10.12. Resistance to pests

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

11. 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.

11.1. 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.

11.2. Wind capacity

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

11.2.1. N1 to N4, and;

11.2.2. C1, C2.

11.3. Bracing capacity

Magnum Board 16mm Weather Board has not been assessed for bracing capacity.



AccreditMark

AccreditMark Appraisal Certificate

MAGNUM[®]
BOARD

Appraisal Number: AML0014AU

Version: 1.1 Dec 2020

Magnum Board 16mm Weather Board

11.4. Fasteners

11.4.1. 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.

11.4.2. 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.

11.5. Fixing arrangement

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

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

11.6. Fire resistance

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

11.6.2. Not assessed for Fire Resistance Rating (FRR)

12. Technical and quality documentation

12.1. Website: www.healthbasedbuilding.com.au provides links to contact, technical, product, support and warranty information.

12.2. Magnum Board Bevel Back Weather Board Technical Information - HBB 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.

12.2.1. The current version of HBB Technical Document # 044AU is Version 3.0.

12.2.2. HBB is responsible for keeping the Magnum Board Bevel Back Weather Board Technical Information up to date, and notifying AccreditMark Limited of any changes.

12.3. Technical data sheet

A product description sheet is available on the HBB website.

12.4. MSDS

12.4.1. Magnum Board MSDS MBGEP-032107-5 is available on the HBB website.

12.5. PQP - HBB Magnum Board PQP

The PQP sets out the quality management requirements for the ordering, shipping, installation, warranty and on-going monitoring of Magnum Board products.

12.5.1. The current version of the HBB Magnum Board PQP is Version 2.2.

12.6. PQP - Magnum Board factory / manufacturer

This PQP 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.

12.7. Warranty information and conditions of warranty

Can be found in HBB Technical Document # 044AU or on the HBB website.



AccreditMark

Appraisal Number: AML0014AU

Version: 1.1 Dec 2020

AccreditMark Appraisal Certificate

MAGNUM[®]
BOARD

Magnum Board 16mm Weather Board

13. Other considerations

13.1. Warehousing, ordering and despatch

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.

13.2. Packaging

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

13.3. Delivery

Identifying marks and product codes are included with each delivery.

13.4. Handling

Magnum Board[®] 16mm Weather Board is transported to site on a flat bed 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.

13.5. Storage on site:

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

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

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

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

13.5.5. Do not stack other materials on top of Magnum Board[®] 16mm Weather Board.

13.6. 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.

13.7. 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.

13.8. Clean up and dust control

13.8.1. 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.

13.8.2. Dust and contaminants must be disposed in accordance with local regulations or authority requirements.



AccreditMark

Appraisal Number: AML0014AU

Version: 1.1 Dec 2020

AccreditMark Appraisal Certificate

MAGNUM
BOARD

Magnum Board 16mm Weather Board

14. Conditions of certification

- 14.1. This Appraisal:
- 14.1.1. Relates only to Magnum Board® 16mm Weather Board;
 - 14.1.2. Must be read, considered and used together with the technical documentation supplied by Health Based Building Ltd.;
 - 14.1.3. Does not address any legislation, regulations, codes or standards not mentioned herein;
 - 14.1.4. Is revalidated annually by AccreditMark Limited;
 - 14.1.5. Is copyright of AccreditMark Limited.
- 14.2. AccreditMark Limited makes no warranty or representation as to:
- 14.2.1. The nature of examples, or batches of, or individual installations of Magnum Board® 16mm Weather Board including methods and workmanship;
 - 14.2.2. The presence or absence of any patent or similar rights subsisting in the product or any other product;
 - 14.2.3. The performance of any paint coating system used with Magnum Board® 16mm Weather Board;
 - 14.2.4. Any guarantee or warranty offered by Health Based Building Ltd.
- 14.3. AccreditMark Limited's assessment of Magnum Board® 16mm Weather Board is based on the technical evidence and documentation available at the time of assessment. If the technical evidence and or documentation is changed or updated in the future, the validity of this appraisal certificate will be re-assessed.

15. Health Based Building Limited's responsibilities

- 15.1. Health Based Building must:
- 15.1.1. Notify AccreditMark Limited 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.
 - 15.1.2. Carry out periodic quality control and conformity tests as requested by AccreditMark Limited.
 - 15.1.3. Keep HBB Technical Document # 044AU up to date and approved by AML prior to public release;
 - 15.1.4. Ensure the latest versions of HBB Magnum Board PQP and HBB Technical Document # 044AU are used by staff and installers;
 - 15.1.5. Comply with AccreditMark Limited's Terms and Conditions.
- 15.2. To maintain validity of their certificate Health Based Building is subject to annual audits and surveillance by AccreditMark Limited of:
- 15.2.1. A building site where Magnum Board® 16mm Weather Board is being installed;
 - 15.2.2. HBB Technical Document # 044AU;
 - 15.2.3. The HBB Magnum Board® PQP.



AccreditMark

Appraisal Number: AML0014AU
Version: 1.1 Dec 2020

AccreditMark Appraisal Certificate

MAGNUM[®]
BOARD

Magnum Board 16mm Weather Board

16. For AccreditMark Limited

Greg Richardson BE (Hons)
Director and Certification Manager

Barrie Titheradge
Unrestricted Building Certifier