



ARDEX AUSTRALIA PTY LTD  
TECHNICAL SERVICES REPORT  
TSD1087

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**Date:** 28 July 2022  
**Prepared By:** Technical Service Department  
**Prepared For:** Ronald Rose  
**Application Area:** Floor- internal dry and wet areas, external

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## BACKGROUND

A request was received to evaluate Magnum Board for potential ARDEX product recommendations for waterproofing and tiling for internal dry and wet applications for wall and floor and also for external walls.

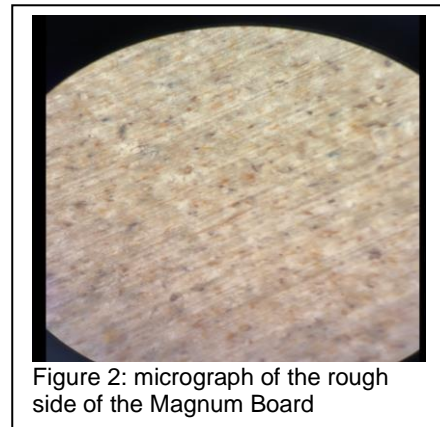
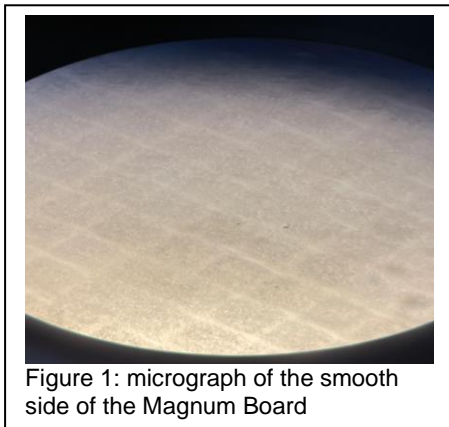
A third-party product recommendation is currently in place and ARDEX alternative product recommendation was requested.

A suitable floor levelling compound over the material was also evaluated for adhesion compatibility.

### Sample Description

Magnum Board is a product exclusive to Health Based Building. Manufactured in New Zealand from a combination of Magnesium Oxide, Magnesium Sulphate and fibre reinforcements, Magnum Board is deemed suitable for use in a variety of internal and external applications.

The board provided for evaluation is the 18mm tongue and groove flooring. Product evaluation was done on both the smooth and rough sides of the board (figures 1 and 2).



## EVALUATION

### Test Method

Tensile testing to a modified ISO13007 (AS4992) method was performed.

The method used to evaluate the adhesion compatibilities was tensile adhesion strength at 28 days dry at ambient laboratory conditions and 7 days dry and 21 days immersed for wet area evaluation. A 25-cycle freeze thaw evaluation was also conducted to validate results obtained in the initial testing.



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### **Recommendations**

The ARDEX products which were tested to be compatible over the Magnum Board are the following:

#### **Internal Dry Floors:**

1. Primer: Ardex WPM300 ± Ardex Primer Sand with Deckweb embedded over the sealant filled T&G joints
2. Tile Adhesives: ARDEX X18 ± ARDEX E90

#### **Internal Wet Area and External Wall:**

1. Primers: ARDEX WPM300
2. Waterproofing Membrane: ARDEX WPM002
3. Tile Adhesives: ARDEX X18 + ARDEX E90

The requirements for the creation of proper fall prior to tiling wet area must be followed. If the fall is not incorporated during board installation in an internal wet area floor, it is recommended to seal the board surface with ARDEX WPM300 before a double layer of 0.2mm thick plastic sheets and 40mm self-supporting screed is installed– floating screed to create falls to waste (1:60 to 1:80). The screed is then waterproofed with Ardex WPM265 primer followed by ARDEX WPM002.

#### **Smoothing Compound (internal ONLY)**

1. Primers: ARDEX WPM300+ARDEX primer sand
2. Levelling Compound: ARDEX Arditex NA, ARDEX K65
3. The smoothing/levelling compound must be waterproofed using ARDEX WPM002 (as above) when used in wet area application.

Suitable renderer's mesh must be incorporated in levelling compound installation over T&G substrates to reinforce the joints and minimise the risks of cracking. After priming, the mesh is fixed onto the board surface using pan head screws or liquid nails depending on choice or mesh to be used. The suitable types of renderers mesh are:

- Truss Forte Rendalok (15mm polygonal steel) [http://trussforte.com.au/?page\\_id=25](http://trussforte.com.au/?page_id=25)
- Colan Products 10mm fibreglass renders mesh- AF616WS <http://www.colan.com.au>

ARDEX Arditex NA can also be applied over self-supporting engineered screed primed using 1:2 diluted ARDEX P51.

#### **Grouting**

1. Cementitious Grouts: ARDEX FG8, ARDEX FSDD -The use of ARDEX Grout Booster (50%) with the cement-based grouts improves the performance such as resistance to water penetration, reduced potential for efflorescence, greater strength, and flexibility.
2. Epoxy Grout: ARDEX EG15- If high physical and chemical resistance is required.



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This evaluation is only based on the adhesion compatibilities of the above-mentioned products over the board and has not taken into consideration the other factors that can be critical for this application (eg. board installation procedure and joint treatments).

The product recommendations are given with the caveat that the board is moisture and dimensionally stable, fit for this purpose and is warranted as such by the manufacturer.

Notes

*All ARDEX products must be applied according to the manufacturer's requirements and instructions.*

*Proper fall, tile finish expansion and movement jointing must comply with requirements of AS3958.1-2007.*

*Waterproofing details must comply with AS3740-2010/12 for internal and AS4654.2-2012 for external applications.*

**CONCLUSION**

The above product recommendations for levelling, waterproofing and tiling are suitable for both the smooth and rough sides of the board.

The board must be installed as per Manufacturer's instructions.

ARDEX accepts no liability for potential moisture sensitivity, decay or dimensional instability problems related to the properties of the Magnum Board. Our products however are fully compatible with each other and adhere to the board in a fit for purpose manner.

*Maria Marquez  
Technical Services Advisor  
ARDEX Australia*



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**Report Basis Conditions**

1. All Ardex/Dunlop products examined and used, have been compared to the recommendations within their Ardex/Dunlop product datasheets and packaging, or any altered requirements in Ardex/Dunlop Technical Bulletins or Ardex System Recommendations which supercede the standard product datasheets. Where a system has been installed in previous years (but within the warranty period) using literature or data now superceded, that information shall be referred to in any discussion of the complaint, not the current information.
2. All third party products used as part of a system, shall be installed in accordance with the product manufacturers recommendations. Ardex reserves the right to make observations of non-conformance where reference has been made to the relevant third party product information or datasheets.
3. All constructions and installations shall comply with the relevant sections of the most recent edition of the National Construction Code of Australia – NCC (formerly the 'BCA' or 'CCA'). Ardex reserves the right to make observations of non-conformance where reference has been made to the relevant sections of the NCC.
4. All ceramic tile related installations shall be checked for concordance with the most recent edition of the Australian Standard AS3958 and where applicable ISO13007 (AS4992). Ardex reserves the right to make observations of non-conformance where reference has been made to the relevant sections.
5. All waterproofing related installations or products shall be checked for concordance with the relevant sections of the most recent editions of the Australian Standards AS/NZS4858 (performance), AS3740 (internal) or AS4654 (external). Ardex reserves the right to make observations of non-conformance where reference has been made to the relevant sections.
6. All flooring installations shall be checked for concordance with the relevant sections of the most recent edition of AS1884 (resilient) or AS/NZS2455 (textile). Ardex reserves the right to make observations of non-conformance where reference has been made to the relevant sections.
7. Ardex reserves the right to reference external materials such public domain documents on the internet, professional literature and textbooks, and government or professional body data.
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