

# MAGLOK™ DRAGONBOARD®

## PURPOSE

Maglok™ DragonBoard® (Maglok™) is a non-combustible board suitable for use as an internal flooring and/or as part of the fire rated acoustic SoundDown floor/ceiling system.

## DESCRIPTION

Maglok™ is a chloride free MgO board. Chloride free MgO boards are also referred to as MGSO4 board or sulphate based MgO board.

The boards are manufactured by combining magnesium oxide (MgO), magnesium sulphate, proprietary fibres and perlite with a water slurry. This mixture is then placed into moulds with layers of fibreglass mesh.

The Maglok™ boards are supplied as follows:

- thickness (mm) 20.
- panel dimensions (mm): 1800 x 1200, 2000 x 1200.

The boards have a shiplap edge which runs down the length of the panel and therefore avoids the need for installation of additional subfloor support.

The panel face has a smooth side and rough side. This provides the option for different finishes..



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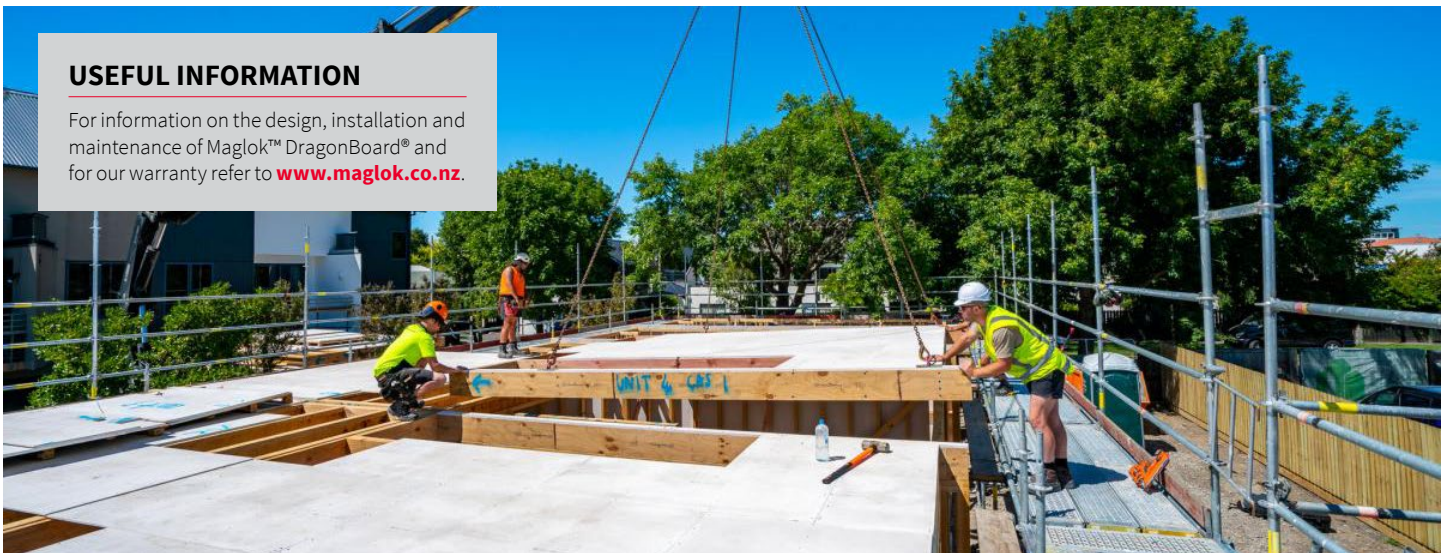


## SCOPE AND LIMITATIONS OF USE

Scope	Limitations
<p><b>Building</b></p> <p>In conjunction with a primary structure that complies with the NZ Building Code or where the designer or installer have satisfied themselves that the existing structure is suitable for the intended building work.</p> <p>In conjunction with a structural support system of lightweight steel, timber, engineered composite joists, metal deck and reinforced concrete.</p>	<ul style="list-style-type: none"> <li>➤ Suitable up to a specific design live load (UDL) of 5 kPa.</li> <li>➤ Where used with steel framing a thermal break may be required.</li> <li>➤ Minimum span spacings for use as a floor or ceiling panel are as follows: <ul style="list-style-type: none"> <li>• 450 mm or 600 mm for panel size 1800 mm x 1200 mm</li> <li>• 400 mm for panel size 2000 mm x 1200 mm.</li> </ul> </li> <li>➤ Fixings must be in accordance with Maglok™ requirements.</li> <li>➤ The Maglok™ board should be overlaid with a floor covering. Where vinyl or similar is to be laid, seams should be filled and sanded flush to create a uniformly smooth surface.</li> <li>➤ Where external wall framing is to be installed on the Maglok™ board ensure that taping of the flexible wrap or rigid air barrier is specified.</li> <li>➤ Where used in shower areas Maglok™ must be protected with a waterproof membrane that meets the requirements of AS/NZS 4858. Other water splash areas must be protected by an impervious floor covering that complies with Clause E3 of the Building Code.</li> </ul>
<p>As an acoustic floor and fire rated system.</p>	<ul style="list-style-type: none"> <li>➤ Must be installed as part of the SoundDown flooring system.</li> </ul>

### USEFUL INFORMATION

For information on the design, installation and maintenance of Maglok™ DragonBoard® and for our warranty refer to [www.maglok.co.nz](http://www.maglok.co.nz).



## PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all Global Procurement Supplies requirements, the Maglok™ DragonBoard® will comply with or contribute to compliance with the following performance claims:

NZ Building Code clauses		BASIS OF COMPLIANCE	
Code clauses	Compliance statement	Demonstrated by	
<b>B1 Structure</b> B1.3.1, B1.3.2, B1.3.3 (a), (b), (e), (f), (i), (j), (m) & (q), B1.3.4 (a, b, c, d, e)	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> <li>➤ Expert analysis of load capacity [Engenium, 23/08/2018].</li> <li>➤ Tested to ASTM C1185-08:2016 (modulus of rupture) and ASTM D6109-97 (modulus of elasticity, shear and flexural strength) [NTA, 09/2018; New York Product &amp; Testing Services Inc, 18/11/2003].</li> <li>➤ Meets bending strength and modulus of rupture requirements of AS/NZS 1860, as cited in section 2.3.6 of NZS 3604:2011 and comparable product certified under section 269 [TBB, 04/2023]</li> </ul>	
<b>B2 Durability</b> B2.3.1 (a), B2.3.2 (a)	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> <li>➤ Meets bending strength and modulus of rupture requirements of AS/NZS 1860, as cited in section 2.3.6 of NZS 3604:2011 and comparable product certified under section 269 [TBB, 01/2022].</li> <li>➤ Sulphate MgO board not subject to tearing at relative humidity range of 40 to 60% [BRANZ, 16/11/2017; TBB, 04/2023].</li> <li>➤ Tested to ASTM G21 for growth of fungus [New York Product &amp; Testing Services Inc, 17/01/2003].</li> </ul>	
<b>C3 Fire affective areas beyond the fire source</b> C3.4 (a, b), C3.7 (a)	ACCEPTABLE SOLUTION C/AS2	<ul style="list-style-type: none"> <li>➤ Meets paragraph 4.17.3 of C/AS2. Non combustible, tested to AS 1530.1:1994 [Intertek, 24/05/2018; Ignis Solutions, 16/07/2017].</li> <li>➤ Class A, tested to ASTM E84 [Global Product Testing Laboratories, 01/04/2016].</li> </ul>	
<b>F2 Hazardous Building Materials</b> F2.3.1	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> <li>➤ Use in accordance with manufacturer's use and safety requirements [Dragonboard USA, 16/02/2018].</li> <li>➤ ASTM G21. New York Product &amp; testing services Inc. [17/01/2003].</li> </ul>	
<b>G6 Airborne and Impact Sound</b> G6.3.1	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> <li>➤ Marshall Day Acoustic opinion [21/09/2021].</li> <li>➤ Marshall Day Acoustic opinion [06/09/2018].</li> </ul>	

## SOURCES OF INFORMATION

- NTA, Inc. [Sept 2018] ASTM C1185-08 (2016). *Standard Test Method for Sampling and Testing- Flexural Strength (Modulus of Rupture)*. Report No. CHSN062618-22.
- DragonBoard USA. [16/02/2018] *Safety Data Sheet*.
- Engenium. [23/08/2018]. *SI Unit Conversion and Load Capacity – MAGLOK Dragon Flooring Board*. File. E1309/0.
- Intertek. [24/05/2018] AS1530.1-1994. *Method for fire tests on building materials: Combustibility test for materials*. Test report no: 180423003SHF-BP-1.
- Ignis Solutions. [16/07/2017]. *Ignis Advisory Note Evaluation No. IGNIS-5218 Issue 01 Revision 00* [2017].
- Fire Check Consultants Pty Ltd. [07/12/2018] *Fire resistance rating of 12 mm DragonBoard*. ABN: 79 612 210 616.
- New York product testing & services Inc. [17/01/2003] ASTM G21. *Standard practice for determining resistance of synthetic polymeric materials to fungi*. Lab No. 03-107565.
- Global Product Testing Laboratories. [04/04/2016] ASTM E 84. *Surface Burning Characteristics of Building Materials*. Lab no. 16-1673.
- New York Product & Testing Services Inc. [18/11/2004] ASTM D6109. *Standard test methods for flexural properties of unreinforced and reinforced plastic lumber and related products*. Lab no. 02-107473B.
- TBB. [04/2023]. *Product Performance Evaluation of Maglok™ DragonBoard® Flooring Substrate*. Version 3.
- BRANZ [16/11/2017]. *Humidity and condensation*. Retrieved from <https://www.level.org.nz/passive-design/controlling-indoor-air-quality/humidity-and-condensation/>. [Accessed on 17/01/2022].
- Marshall Day Acoustics. [21/09/2021] *SoundDown Acoustic Floor Opinion Estimation of Sound Insulation Performance*. Rp 004 20180802.
- Marshall Day Acoustics. [06/09/2018] *SoundDown Acoustic Floor Opinion Estimation of Sound Insulation Performance*. Rp 002 20180802.

Scan or click this QR code for a full download of Compliance Documentation for this pass™.  
[www.maglok.co.nz/technical-documents/](http://www.maglok.co.nz/technical-documents/)



1. Where a standard is referenced it is to be read as amended by the acceptable solution or verification method as applicable.
2. Sources of information also include the Building Act 2004 and its regulations, including the Building Code (Schedule 1 of the Building Regulations 1992), Acceptable Solutions and Verification Methods, and relevant cited standards.
3. The quality and assurance that the supplied products meet the performance claims stated in this pass™ are the responsibility of the company that is the holder of this pass™.

Global Procurement Supplies Ltd confirms that if Maglok™ DragonBoard® is used in accordance with the requirements of this pass™ the product will comply with the NZ Building Code and other performance claims set out in this pass™ and the company has met all of its obligations under s14 G of the Building Act.

**Date of first issue:** 21/04/2020

**Date of current issue:** 19/04/2023

**NZBN:** 9429039131843

Kevin Brunton

Kevin Brunton, Technical Director, TBB confirms that this pass has been prepared on behalf of Global Procurement Supplies Ltd and in accordance with MBIE PTS guidelines and in accordance with the TBB pass™ process which is within the scope of TBB's ISO 9001 certification.

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