

SOUNDDOWN DUO SYSTEM

PURPOSE

SoundDown Duo is a load-bearing, acoustic and fire rated intertenancy floor/ceiling system.

EXPLANATION

SoundDown Duo is a two-layer floor/ceiling system that achieves an STC rating of 64 dB, an IIC rating of 62 dB and incorporates a 60/60/60 fire rated ceiling; the floor structure is excluded from the fire cell. SoundDown Duo is installed in conjunction with a timber or lightweight steel structural frame and timber joists.

SoundDown Duo comprises:

- Maglok™ DragonBoard® Flooring - 20 mm, fixed with 8 g x 50 mm class 3 galvanised substrate screw fixing fixed at 300 mm centres.
- SoundDown acoustic flooring battens - seated on rubber deckchairs set at 450 mm centres.
- Vermiculite lightweight acoustic granules - 70 mm deep. Vermiculite is a phyllosilicate mineral that is an environmentally friendly, low density granule. It is absorbent and non-combustible, contributing to the acoustic performance.
- Maglok™ DragonBoard® - 20 mm, fixed with Maglok™ floor substrate fixing to timber joists at 200 mm centres.
- SG8 timber joist - 190 mm x 45 mm set at 450 mm centres or lightweight steel framing to an equivalent stiffness set at 450 mm.
- Rondo STPC ceiling mounts assembled with acoustic clips.
- Mammoth™ polyester insulation R1.8/900 gsm.
- Rondo 129 Furring Channel steel ceiling battens - 28 mm.
- USG Boral Firestop® - 2 layers of 13 mm thick board screwed to steel battens, sealed with USG Firesound®.



For further assistance
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SCOPE AND LIMITATIONS OF USE

Scope	Limitations
Building	
In conjunction with a timber or lightweight steel structural frame that complies with the NZ Building Code or where the designer and/or installer have established that the existing building is suitable for the intended building work.	
As an acoustic intertenancy midfloor.	➤ Installation to be in accordance with assessed assembly.
As a fire rated intertenancy midfloor.	➤ Installation to be in accordance with assessed assembly. ➤ SoundDown Duo achieves a maximum fire resistance rating, from below, of 60/60/60.

CONDITIONS OF USE

Where substitutions to the SoundDown Duo system are proposed, the design must be subject to the review by an Acoustic Engineer, to ensure the acoustic performance is not diminished.

PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all Trade Supply Limited requirements, the SoundDown Duo will comply with or contribute to compliance with the following performance claims:

NZ Building Code clauses	Compliance statement	BASIS OF COMPLIANCE Demonstrated by
B1 Structure B1.3.1, B1.3.2, B1.3.3 (a, b, c, e, f, i, j, l, m, o, r), B1.3.4 (a, b, c, d, e)	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> ➤ USG Boral Firestop® manufactured to AS/NZS 2588, tested to ASTM E695-75 and ASTM E720-80 for impact and static pressure [USG Boral, 2017]. ➤ Rondo Battens, Channel and Mounts manufactured to AS 1397-2011, manufacturer's claim [Rondo, n.d., 09/2015]. ➤ Maglok™ DragonBoard® pass™ 19115 [Maglok™ DragonBoard®, 2021].
B2 Durability B2.3.1 (a), B2.3.2 (a)	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> ➤ USG Boral Firestop® manufactured to AS/NZS 2588 [USG Boral, 01/10/2017]. ➤ BRANZ Appraisal No. 802 Mammoth™ Underfloor Insulation [BRANZ, 2014]. ➤ Rondo Battens, Channel and Mounts manufactured to AS 1397, manufacturer's claim [Rondo, n.d., 09/2015]. ➤ Maglok™ DragonBoard® pass™ 19115 [Maglok™ DragonBoard®, 2021]. ➤ Vermiculite tested material properties claimed by manufacturer [Ausperl, 08/2016].

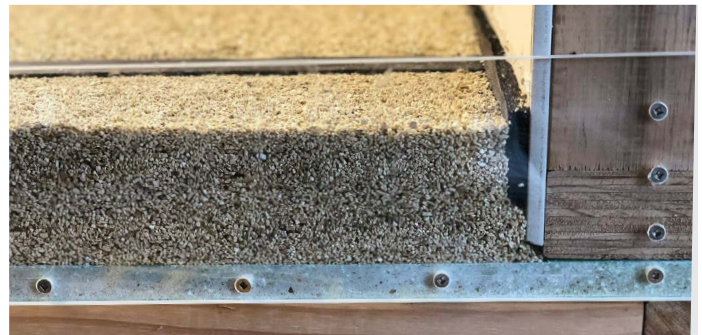
USEFUL INFORMATION

For information on the design, installation and maintenance of the SoundDown Duo and for our warranty refer to www.sounddown.co.nz.

NZ Building Code clauses	Compliance statement	BASIS OF COMPLIANCE Demonstrated by
C3 Fire affecting areas beyond the fire source C3.4 (a, b)	ACCEPTABLE SOLUTION C/AS1 C/AS2	<ul style="list-style-type: none"> ➤ USG Boral Firestop® has a material group number 1-S [BRANZ, 2015]. ➤ Maglok™ DragonBoard® pass™ 19115 [Maglok™ DragonBoard®, 2021].
C6 Structural stability C6.2 (a, b, c, d)	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> ➤ USG Boral Firestop® tested to AS 1530.4-1997 by CSIRO, manufacturer's claim [USG Boral, 2017].
F2 Hazardous Building Materials F2.3.1	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> ➤ USG Boral Firestop® manufactured to AS/NZS 2588 [USG Boral, 2017]. ➤ BRANZ Appraisal No. 802 Mammoth™ Underfloor Insulation [BRANZ, 2020]. ➤ Rondo Battens, Channel and Mounts manufactured to AS 1397, manufacturer's claim [Rondo, n.d., 09/2015]. ➤ Maglok™ DragonBoard® pass™ 19115 [Maglok™ DragonBoard®, 2021]. ➤ Use of Vermiculite granules in accordance with manufacturer's safety data sheet [Ausperl, 01/06/2016].
G6 Airborne and impact sound G6.3.1	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> ➤ Marshall Day Acoustic opinion [21/09/2021]. ➤ Marshall Day Acoustic Opinion [06/09/2018].
H1 Energy efficiency H1.3.1 (a), H1.3.2E	ACCEPTABLE SOLUTION	<ul style="list-style-type: none"> ➤ BRANZ Appraisal No. 802 Mammoth™ Underfloor Insulation [BRANZ, 2020].

SOURCES OF INFORMATION²

- Auckland UniServices. [n.d.a] Laboratory measurement of airborne and impact insulation of a SoundDown acoustic flooring system with SoundDown lightweight acoustic granules in the upper cavity.
- Auckland UniServices. [n.d.b] Laboratory measurement of airborne and impact insulation of a SoundDown acoustic flooring system with an empty upper cavity.
- Ausperl. [01/06/2016] *Material Safety Data Sheet*. Retrieved from <https://www.ausperl.com/wp-content/uploads/MSDS-Vermiculite-Safety-Data.pdf>. [Accessed on 18/10/2021].
- Ausperl. [08/2016] *Technical Data Sheet Exfoliated Vermiculite*. Retrieved from <https://www.ausperl.com/wp-content/uploads/TDS-Vermiculite-1.pdf>. [Accessed on 18/10/2021].
- BRANZ. [03/12/2015] *USG Boral Bracing Systems*. Appraisal No. 899 (2015). Retrieved from <https://www.branz.co.nz/appraisal-codemark-certificates/899-2015-usg-boral-bracing-systems/>. [Accessed on 11/06/2021].
- BRANZ. [2/09/2020] *Mammoth™ Underfloor Insulation*. Appraisal No. 802 (2020). Retrieved from <https://www.branz.co.nz/appraisal-codemark-certificates/mammothm-underfloor-insulation/>. [Accessed on 11/06/2021].
- Maglok™ Dragonboard®. [06/05/2021] *Maglok™ Dragonboard®. pass™ no. 19115*. Retrieved from <https://www.thebuildingbusiness.co.nz/maglok-pass-landing>. [Accessed on 11/06/2021].
- 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.
- Rondo. [09/2015] *Rondo Acoustic Wall & Ceiling Systems Manual*. Retrieved from <https://www.rondo.co.nz/resources/installation/product-manuals/>. [Accessed on 11/06/2021].
- Rondo. [n.d.] *Rondo Key-Lock® Concealed Suspended Ceiling System*. Retrieved from <https://www.rondo.co.nz/resources/installation/product-manuals/>. [Accessed on 11/06/2021].
- USG Boral. [01/10/2017] *Firestop® Product Technical Statement*. PTS202/3. Retrieved from https://www.usgboral.com/content/dam/USGBoral/New_Zealand/Website/Documents/English/technical-data/USG%20Boral%20Firestop%20%20PTS202-3%2010-17.pdf. [Accessed on 18/10/2021].



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www.sounddown.co.nz



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.

Trade Supply Limited confirms that if SoundDown Duo is used in accordance with the requirements of this pass™ the product will comply with the 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:

Date of current issue:

NZBN: NZBN 9429046137944

Kevin Brunton

Kevin Brunton, Technical Director, TBB confirms that this pass has been prepared on behalf of the Trade Supply Limited 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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