

Contrix Pty Ltd

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IMPACT NOISE TESTING OF HARD FLOOR COVERING

Elite Wooden Floors

Contrix Pty Ltd was requested to perform an impact noise assessment on the selected hard floor covering within the residential apartment in Macquarie Park NSW.

The aim of conducting this impact noise test was to determine the acoustic rating of the selected hard floor covering (Stonecore Hybrid - 9mm) and the results are to be used for design guidance only.

All measurements and assessment procedures were conducted in compliance with the standards:

- AS/NZS ISO 140.7:2006, titled "Field measurements of impact sound insulation of floors", and
- ISO 717.2-2004, titled "Rating of sound insulation in buildings and of building elements".

Tests were conducted in the open living areas of the residential units in Macquarie Park on Tuesday, 20th May 2025. The receiver space is located directly below the noise source room and has the same floor layout.

Based on our test results and calculations, Stonecore Hybrid - 9mm tested within the residential apartment in Macquarie Park achieves the acoustical ratings of:

- Measured Weighted Standardised Sound Level Different, L'_{nTw} **43**
- Field Impact Insulation Class, **FIIC 64**
- AAAC Star Rating **5**

A summary page of testing results can be found on page 2, followed by a detailed technical data sheet in the subsequent page.

IMPACT NOISE INSULATION FIELD TEST REPORT SUMMARY

Testing Date:	Tuesday 20 th May 2025
Prepared For:	Elite Wooden Floors
Testing Location:	Residential Apartment in Macquarie Park NSW
Flooring System Tested:	Stonecore Hybrid - 9mm
Separating partition system:	Reinforced concrete slab of approximately 200-220mm Suspended ceiling cavity of 80-120mm 10mm or 13mm thick plasterboard ceiling
Source Room:	Living area of on the upper floor level
Receiver Room:	Living area of on the lower floor level (directly below)

Test Results					
Floor covering	Underlay	Acoustic Performance			
		L' nTw	FIIC	AAAC Star Rating	Δ L' nTw
Stonecore Hybrid - 9mm	Built-in	43	64	5	13

Sound Source:	Tapping Machine TM004 S/N 59005
Measuring Device:	NTi-XL2 precision spectrum analyser S/N A2A-11580-E0

Measurements were conducted in accordance with:

- Australian Standard AS ISO 717.2-2004, Acoustics - Rating of sound insulation in buildings and of building elements;
- ASTM E1007-14 - Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structure", and
- International Standard ISO 16283-02:2015, Acoustics – Field measurement of sound insulation in buildings and of building elements.

Tested By:	Michael Fan Chiang BE (Mech)., MAAS Consultant 	Report Date: 26 th May 2025
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Disclaimers:

1. The information provided in this report relates to sound insulation of floor covering only.
2. Contrix Pty Ltd does not supply and install any flooring products, therefore, not responsible or liable for any product defects.
3. It is imperative to strictly adhere to the installation guidelines provided by the supplier or installation instructions (if any). Contrix Pty Ltd bears no liability in the event of non-compliance with these instructions.
4. This testing report is site-specific and only applies to the subject premise and product(s) tested as specified in this document.
5. The acoustic rating typically varies by up to 3 L'nTw rating points, influenced by the placement of the tapping machine, testing locations within the unit, and the junction details between the floorboards, skirting, scotia, and walls. Many strata management and certifying authorities permit a tolerance of 3 L'nTw rating points. Furthermore, deviations of up to 5 L'nTw rating points have been recorded in rare cases.
6. The test results detailed in this report are intended solely for use as design guidelines and should not be interpreted as formal certification of the tested products.
7. The use of any glue or adhesive can negatively impact the acoustic rating. Based on previous testing data, a degradation of up to 5 L'nTw has been recorded.
8. It is highly recommended to engage a qualified acoustic consultant (Contact Contrix Pty Ltd on +61 425 240 555 or other qualified consultants) to conduct in-situ testing (field testing) prior to flooring installation.

Technical Data Sheet - Standardised Impact Sound Pressure Level
Impact Sound Insulation Testing of Floorboards
Residential appartement in Macquarie Park NSW

Testing Date: Tuesday, 20 May 2025

Test No.: N/A

Client/Owner: Elite Wooden Floors

Testing Location: Residential appartement in Macquarie Park NSW

Floor Finish: Stonecore Hybrid - 9mm

Acoustic Underlay: Built-in

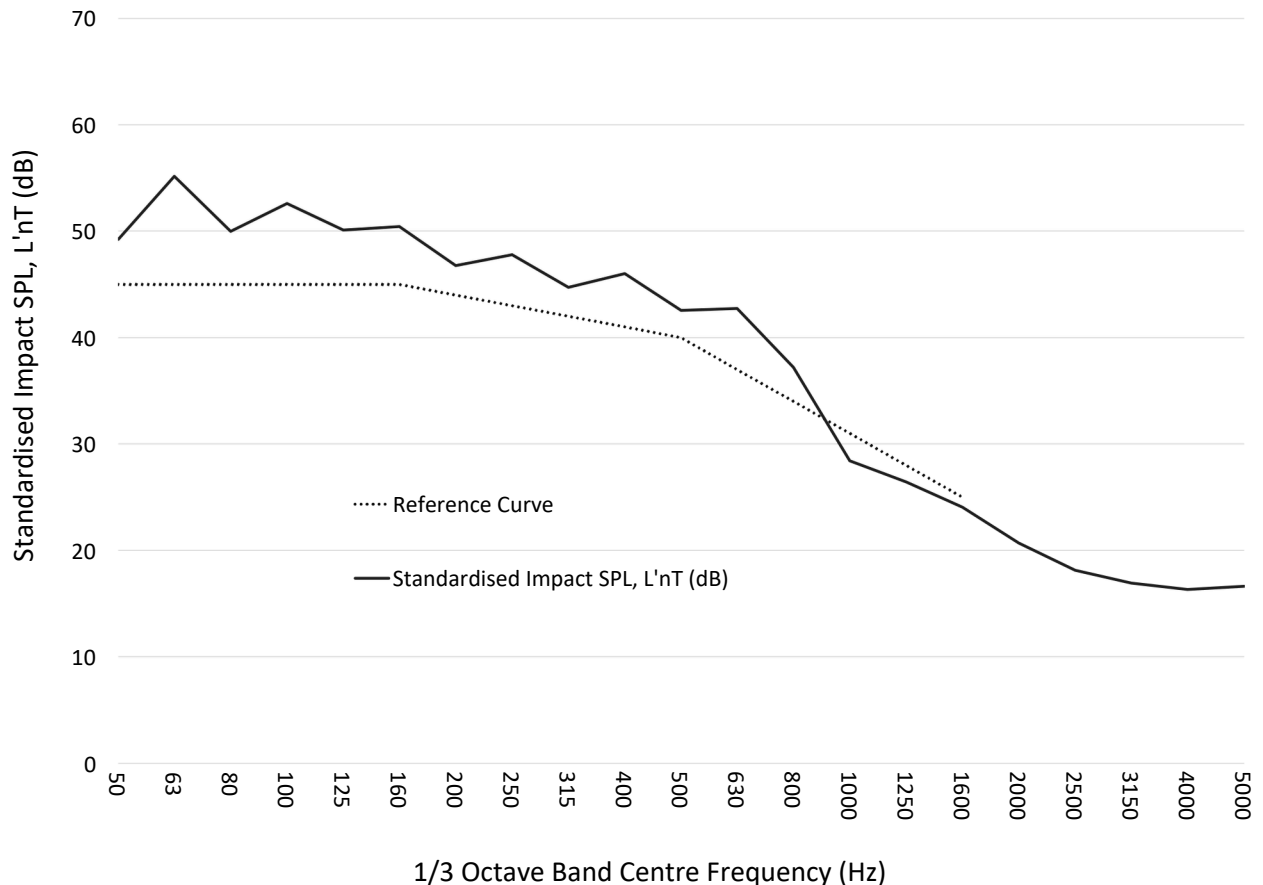
Sub-base & ceiling below: Reinforced concrete slab of 200~220mm

Suspended ceiling cavity (80~120) with 10mm or 13mm thick plasterboard ceiling

Source Room: Living area on the upper floor level

Receiver Room: Living area on the lower floor level (directly below)

Approx. receiver room vol: 64.28



1/3 Octave Band Centre Frequency (Hz)	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
L'nT [dB]	49.2	55.2	50.0	52.6	50.1	50.4	46.8	47.8	44.7	46.0	42.5	42.7	37.2	28.4	26.4	24.0	20.7	18.1	16.9	16.3	16.6

Acoustical Rating

Reference/Guideline

Measured Weighted Standardised Sound Level Difference, L'nTw

43

AS ISO 717.2 - 2004

Field Impact Isolation Class, FIIC

64

ASTME1007-14

AAAC Star Rating

5

AAAC Guideline

Testing Date : Tuesday, 20 May 2025
Reference No.: 3904
Testing Organisation: Contrix Pty Ltd
Tested By: Michael Fan Chiang
BE(Mech)., MAAS

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