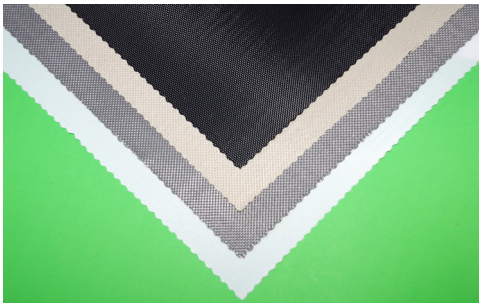
Acoustic Backing for Timber Slats

Engineering Recommendations

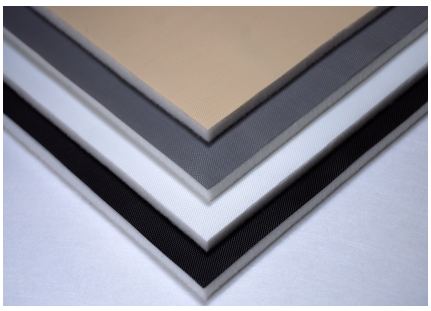
Megasorber acoustic backing materials have enabled timber slats to combine aesthetic appeal with acoustic functionality. Utilising the patented sound absorbing technology, Megasorber engineering has successfully developed two versions of the acoustic backing materials as follows:

- **Soundmesh® G8:** a thin fireproof acoustic lining fabric and
- **Megasorber P5:** a thin acoustic board (5mm thick) with a fireproof sound absorbing Soundmesh G8 facing.

Soundmesh G8 in black, sandstone, grey and white colours

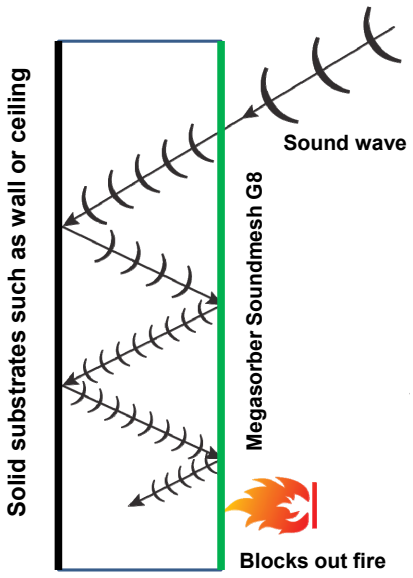


Megasorber P5 with sandstone, grey, white and black facing



The unique sound absorption mechanism:

Soundmesh® G8 is a patented smart material which breaks the soundwave down to small components, then traps and dissipates the soundwave within the spacer behind it (*U.S. PAT NO. 8167085; Australian Patent No. 2009206197*). A schematic drawing is shown below with a solid substrate such as a wall, ceiling and so on. Soundmesh® G8 has been engineered to have acoustic impedance tuned specifically for timber slats to maximise sound absorption.



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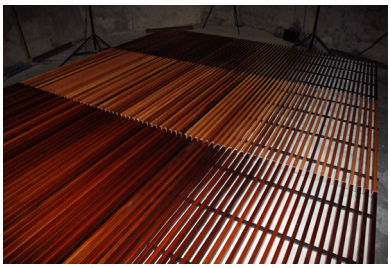
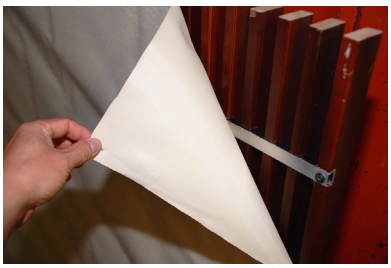
Acoustic performance of some typical panels:

1. Timber slats with Soundmesh G8:

(1) Timber slats details:

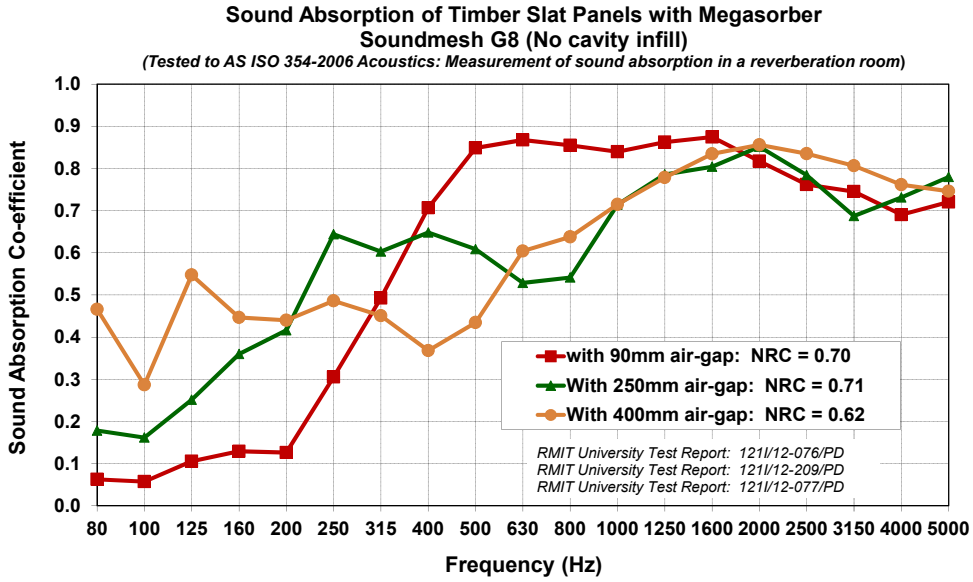
- Timber thickness: 38mm;
- Timber width: 70mm;
- Space between timber slats: 20mm;

Megasorber Soundmesh G8SS (Sandstone) installed onto the back of the timber slats

(2) Acoustic performance:

- ***Air-gap: 90mm; NRC = 0.70;***
- ***Air-gap: 250mm; NRC = 0.71***
- ***Air-gap: 400mm; NRC = 0.62***



The acoustic performance varies with the timber slat panel design, such as

- the space between the timber slats,
- the timber width,
- the timber thickness and
- the air-gap.

The NRC is typically in the range of 0.60 to 0.80 after the application of Soundmesh G8.

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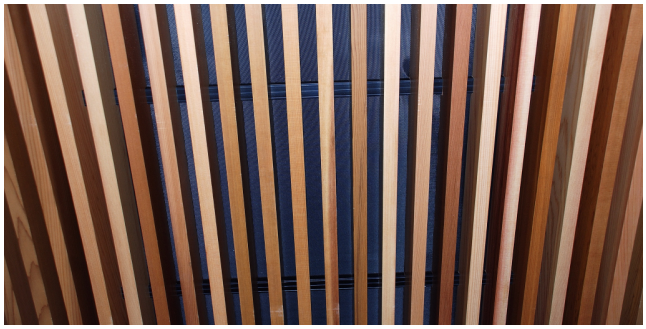
(3) Application:

- Soundmesh G8: adhere onto perforated or slotted panels with spray-on adhesive such as Megasorber A100 or stapled with a staple gun.
- Soundmesh G8A: it has a pre-applied heat re-active hot melt adhesive. It is deigned to be adhered on to timber slats with heat, such as iron or hot rollers.
- Soundmesh G8 or G8A must be fully tensioned or stretched when applied in order to achieve the exceptional sound absorption capacity.

2. Timber slats with Megasorber PN5 (or P5BK(BP)):

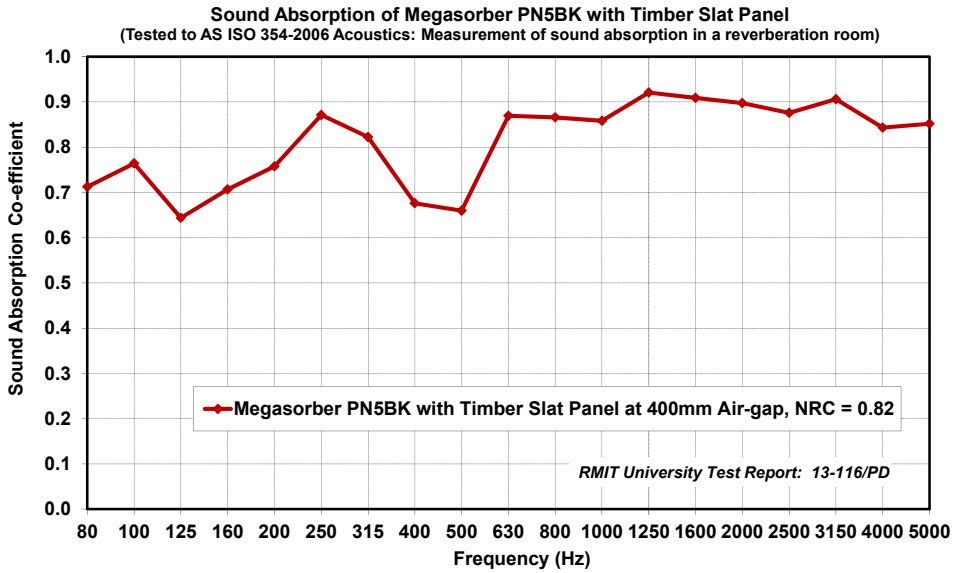
(1) Timber slats details:

- Timber thickness: 38mm;
- Timber width: 70mm;
- Space between timber slats: 20mm;



(2) Acoustic performance:

- Air-gap: 400mm;
- NRC: 0.82



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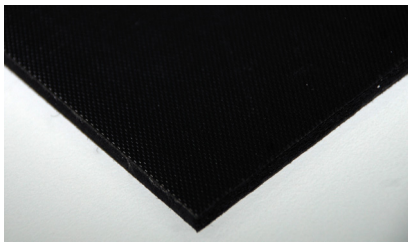
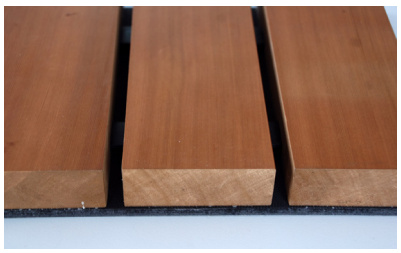
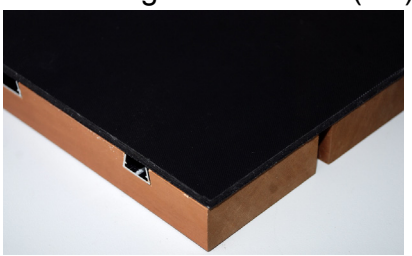
If a black base and a black facing is preferred, then the product code is Megasorber P5BK(BP):



(1) Megasorber P5BK(BP)



(2) Front: Timber slat with P5BP(BP)



(3)Back: Timber slat with P5BP(BP)

Summary:

- Soundmesh G8 and Megasorber PN5 (or P5BK(BP)) provides the acoustic performance of timber slats.
- The NRC is typically in the range of 0.60 to 0.75 after installed with Soundmesh G8.
- The NRC is typically in the range of 0.80 to 0.85 after installed with Soundmesh PN5 (or P5BK(BP)).

The above is a general guidance only. Please contact us for a customised solution.

If you require further information, please visit our website www.megasorber.com or contact us.

Important notice and disclaimer:

Specifications are subject to change without notice. Please contact us for the latest version.
"Fireproof", "Non-flammable", "Non-combustible" means the product has successfully passed AS/NZS 3837, IS0 5660-1, ASTM E1354 Group 1 fire rating (AWTA test report No. 7-566397-CV).
Patent applied for Soundmesh G8 (U.S. Patent No. 8167085, Australian Patent No. 2009206197). The data listed in this data sheet are typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials and installation methods must be tested under actual service to determine their suitability for a particular purpose. "Aussie engineered and made" means the products are engineered and made in Australia with globally sourced materials.

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