

Sound Absorption: Megasorber PN

Acoustic Board with Non-combustible Soundmesh G8 Facing

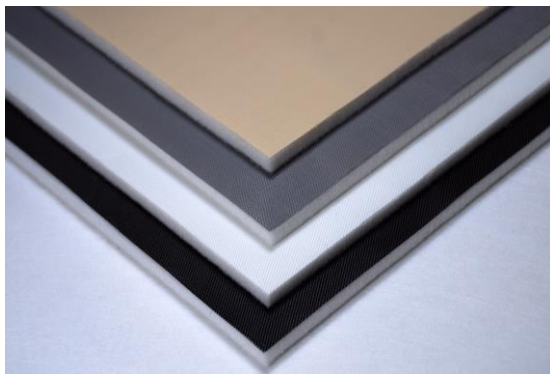
Product Codes: Megasorber PN5 and PN8



IMO COMPLIANT

OVERVIEW

Megasorber PN is a thin and rigid sound absorption board with a patented acoustically tuned non-combustible sound absorbing Soundmesh[®] G8 facing (U.S. Patent No. 8167085, Canadian Patent No. 2674986, Australia Patent No. 2009206197).



Megasorber PN with grey, white, sandstone and black colour G8 facing

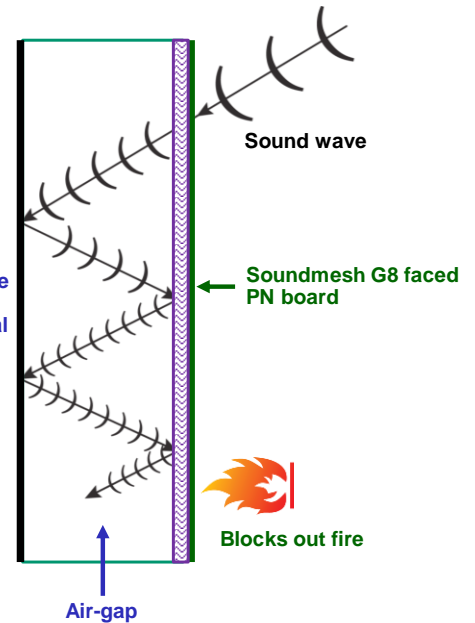
Megasorber PN is specifically designed as an acoustic backing board for timber or metal battens, timber slats, perforated / slotted panels, expanded metal ceiling tiles and so on. It is also widely used as drop-in ceiling tiles for standard ceiling grid. It is a printable acoustic board and a pin-able acoustic board.

- **Superior acoustic performance: NRC up to 0.80 (with an air-gap)**

Megasorber PN utilises the patented sound absorption technology and has superior sound absorption capacity. The **Soundmesh[®] G8** facing is a smart material which breaks the soundwave down into smaller components, then traps and dissipates the soundwave within the spacer behind it.

- **BCA Group 2 fire rating**

Megasorber PN has Building Code Australia (BCA) Group 2 fire rating as per AS5637.1-2015 with a non-combustible G8 facing. It complies with IMO Resolution A653(16) requirements.



The patented sound absorption mechanism

- **Impact resistant and easy to clean**

Megasorber PN is impact resistant and has high durability in hot and humid conditions (long service life). It has a protective surface which is tough, durable and easy to clean. Any dirt marks or finger marks on the Soundmesh G8 facing can be easily removed with Megasorber Clean M8. A fluid / water-repellent G8 facing option is also available. This built-in fluid / water repellent feature of the Soundmesh G8 makes it ideal for potential exposure to the weather.



Water / Fluid repellent Soundmesh G8 (optional)

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FEATURES

- Superior sound absorption utilizing patented technology
- BCA Group 2 fire classification with non-combustible sound absorbing facing
- IMO Resolution A653(16) compliant
- Tough, durable and water / fluid repellent facing (optional)
- Long service life i.e., will not deteriorate when exposed to hot and humid conditions
- Ease of cleaning: use Megasorber Clean M8 with water to remove any dirt or finger marks

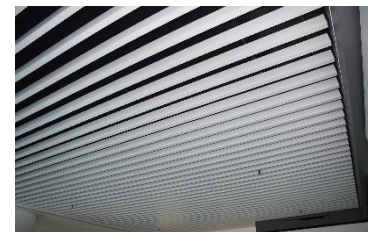
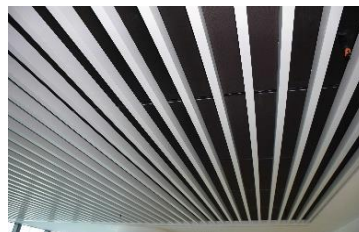
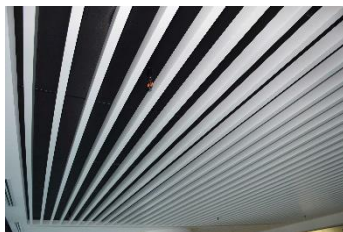
TYPICAL APPLICATIONS

- Specifically designed to be used behind timber slat, perforated or slotted MDF board /Cement sheets / plasterboards, perforated metal sheet;
- Printable acoustic boards;
- Drop-in ceiling tile for standard ceiling grid;

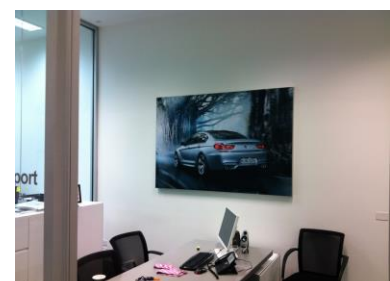
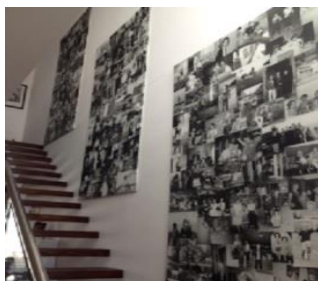
1. Megasorber PN5: acoustic backing for timber slat panels – Perth Stadium



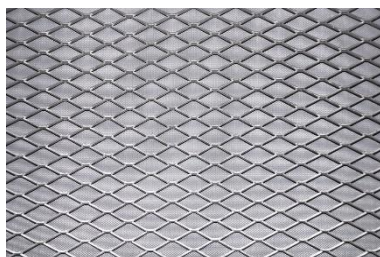
2. Megasorber PN5: acoustic backing for aluminium battens:



3. Printable acoustic boards or panels



4. Megasorber PN on standard ceiling grids and expanded metal ceiling panels



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TECHNICAL SPECIFICATIONS

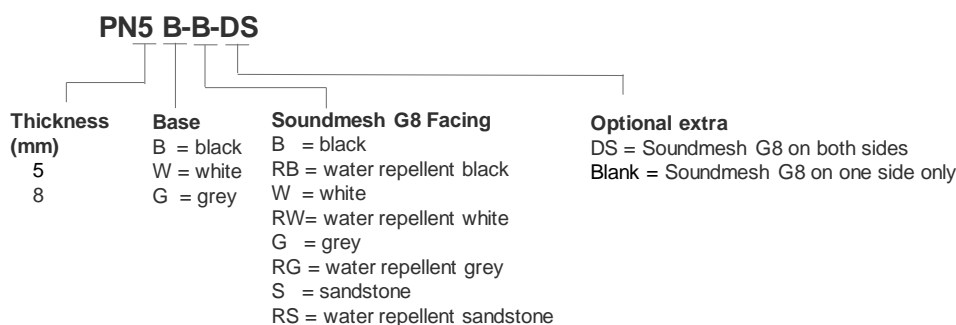
A. Product codes:

STANDARD PRODUCT	NORMINAL THICKNESS	SHEET SIZE
Megasorber PN5	5mm	1.2m x 2.4m

Other thickness available:

PRODUCT CODE	NORMINAL THICKNESS	SHEET SIZE
Megasorber PN2	2mm	1.2m x 2.4m
Megasorber PN8	8mm	1.2m x 2.4m

(1) Product codes with optional extra:



For example:

- PN5B-B: 5mm thick, black base with black Soundmesh G8 facing;
- PN5B-RB: 5mm thick, black base with black, water repellent Soundmesh G8 facing;
- PN5B-B-DS: 5mm thick, black base with black Soundmesh G8 facing on both sides;
- PN8W-G: 8mm thick, white base with grey Soundmesh G8 facing.

- (2) Standard facing colours are: white, grey and black; Sandstone is made to order. We can colour match to any customised colours. However, MOQ (minimum order quantity) applies.
- (3) The default base colour is black for PN5 and white for PN8 and PN2
- (4) Water / fluid* repellent facing is recommended for easy surface cleaning.
* Please note does not include petroleum or solvent based fluids.
- (5) Clean dirt marks or finger marks with Megasorber Clean M8 block.
- (6) G8 facing may have a stripy appearance or creases. Hairline creases may appear on the facing when handling, these are difficult to remove. The creases will not affect the acoustic performance.
- (7) There are colour variations between batches, especially for the grey and sandstone colours. Soundmesh G8 facing made from different batches may be difficult to colour match.
- (8) Thickness tolerance is ± 1mm for PN5 and PN8 and ± 0.5mm for PN2. The sheet dimension tolerance is ± 1%.
- (9) Standard sheet size is 1.2m x 2.4m. We can cut panels to size, however, extra cutting charges apply.

B. Physical properties:

- 1) Thermal Operating Range: -40°C to + 100°C
- 2) Thermal Conductivity: 0.033W/mK;
- 3) Density and weight:

Product code	PN2	PN5	PN8
Nominal Density (kg/m ³)	300	240	194
Nominal Weight (kg/m ²)	0.6	1.2	1.55

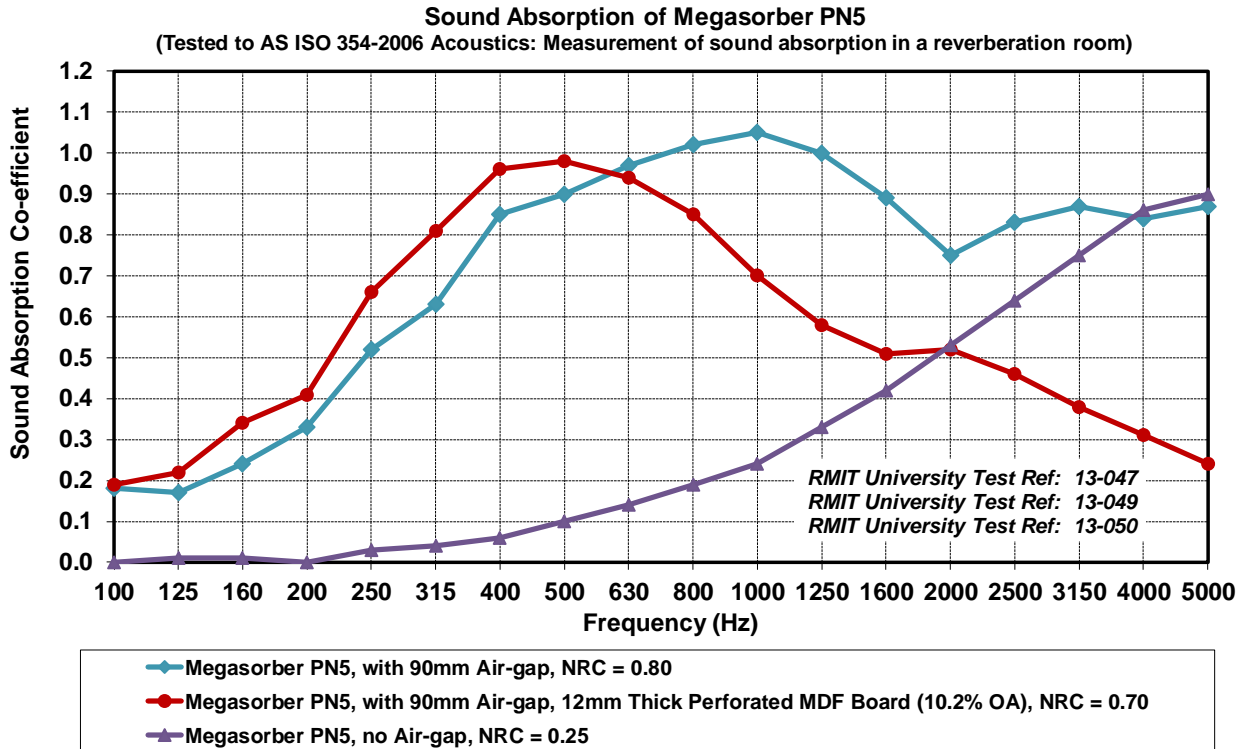
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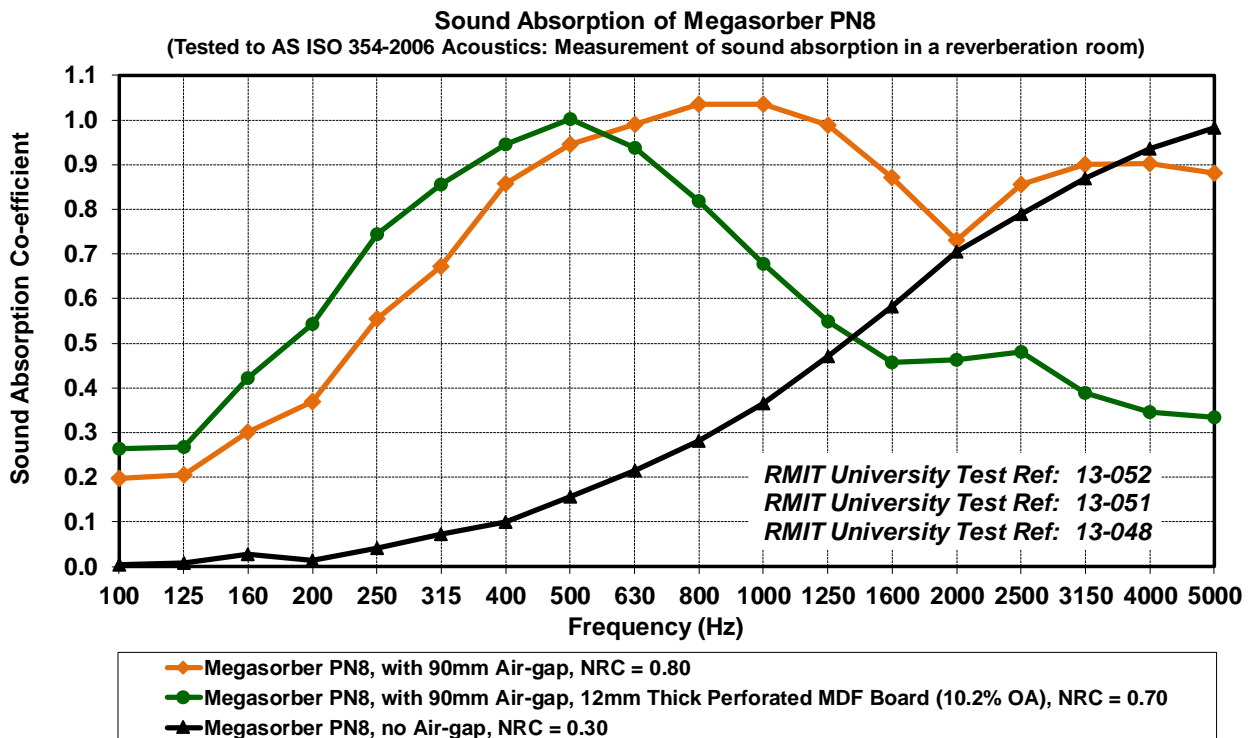
C. Acoustical Properties – typical results when tested in a reverberation room:

AS ISO 354-2006: 'Acoustics: Measurement of sound absorption in a reverberation room'.

(1) PN5 with no air-gap; PN5 and PN5 with perforated board at 90mm air-gap:



(2) PN8 with no air-gap; PN8 and PN8 with perforated board at 90mm air-gap:



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AS ISO 354-2006 Measurement Results

Frequency Hz	Megasorber PN5			Megasorber PN8		
	By itself without air-gap	With 90mm air-gap	With 90mm air-gap and 12mm Perforated MFD (10.2% Opening Area)	By itself without air-gap	With 90mm air-gap	With 90mm air-gap and 12mm Perforated MFD (10.2% Opening Area)
100	0.00	0.18	0.19	0.00	0.20	0.26
125	0.01	0.17	0.22	0.01	0.21	0.27
160	0.01	0.24	0.34	0.03	0.30	0.42
200	0.00	0.33	0.41	0.01	0.37	0.54
250	0.03	0.52	0.66	0.04	0.55	0.74
315	0.04	0.63	0.81	0.07	0.67	0.86
400	0.06	0.85	0.96	0.10	0.86	0.95
500	0.10	0.90	0.98	0.16	0.95	1.00
630	0.14	0.97	0.94	0.22	0.99	0.94
800	0.19	1.02	0.85	0.28	1.04	0.82
1000	0.24	1.05	0.70	0.37	1.04	0.68
1250	0.33	1.00	0.58	0.47	0.99	0.55
1600	0.42	0.89	0.51	0.58	0.87	0.46
2000	0.53	0.75	0.52	0.71	0.73	0.46
2500	0.64	0.83	0.46	0.79	0.85	0.48
3150	0.75	0.87	0.38	0.87	0.90	0.39
4000	0.86	0.84	0.31	0.94	0.90	0.35
5000	0.90	0.87	0.24	0.98	0.88	0.33
NRC	0.25	0.80	0.70	0.30	0.80	0.70

Note: RMIT University Test (1) Statement Reference: 13-047, 13-049 and 13-050 Comp; (2) Statement Reference: 13-048, 13-051 and 13-052 Comp

- **Megasorber PN5 and PN8 with 90mm air-gap: NRC= 0.80**

Frequency (Hz)	125	250	500	1000	2000	4000	NRC
Megasorber PN5	0.20	0.50	0.90	1.00	0.80	0.85	0.80
Megasorber PN8	0.25	0.55	0.90	1.00	0.80	0.90	0.80

- **Perforated MDF Panel, 10.2% opening area, with PN5 and PN8 backing at 90mm air-gap: NRC= 0.70**

Frequency (Hz)	125	250	500	1000	2000	4000	NRC
Megasorber PN5	0.30	0.65	0.95	0.70	0.45	0.35	0.70
Megasorber PN8	0.30	0.70	0.95	0.70	0.45	0.35	0.70

Please click on the video link, <http://www.megasorber.com/4fold-approach/sound-absorption.html> to hear how Megasorber sound absorption materials have effectively reduced the reverberation (or echo) noise.

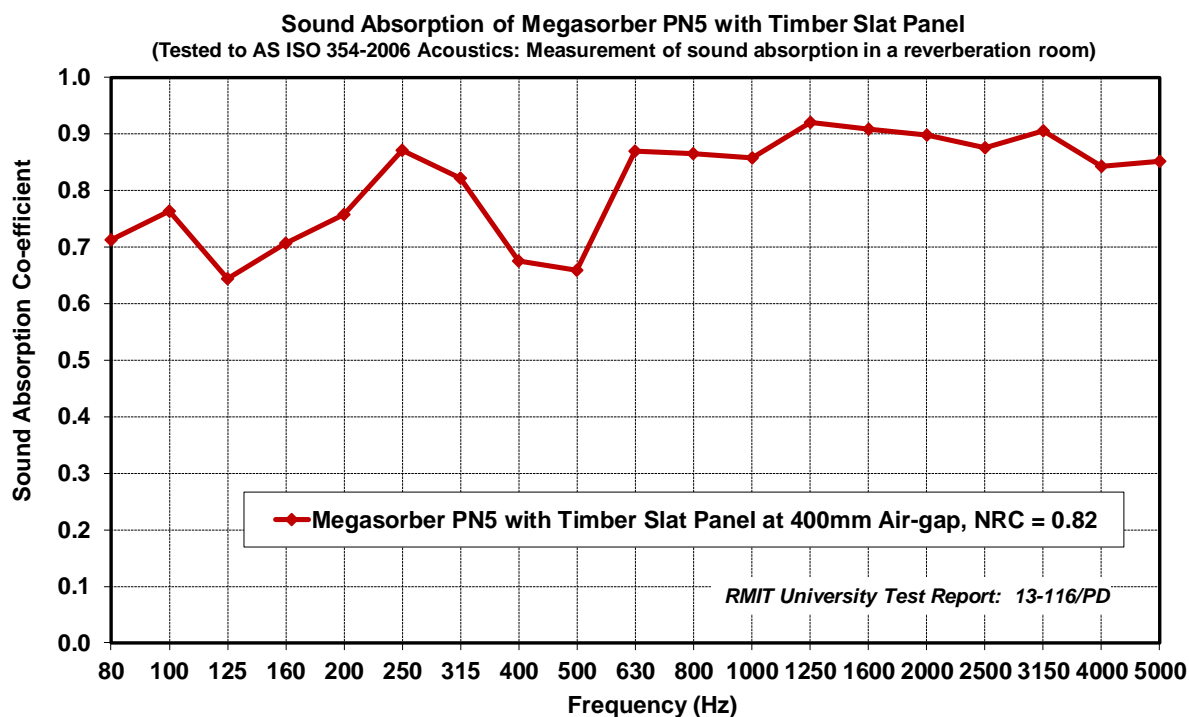
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(3) Megasorber PN5 with timber slat panel at 400mm air-gap: NRC = 0.82

Timber slats details:

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



AS ISO 354-2006 Measurement Results

Frequency (Hz)	Megasorber PN5 with timber slats
100	0.76
125	0.64
160	0.71
200	0.76
250	0.87
315	0.82
400	0.68
500	0.66
630	0.87
800	0.87
1000	0.86
1250	0.92
1600	0.91
2000	0.90
2500	0.88
3150	0.91
4000	0.84
5000	0.85
NRC	0.82

Note: RMIT University Test Report 13-116/PD

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D. Flammability:

- AS 5637.1-2015: BCA Product Group Number Classification:

BCA Classification	Average Specific Extinction Area
Group 2	338.9 m ² / kg

- British Standard BS 476-Part 6 and Part 7: **Class 0 classification.**

Note: A Class 0 is the highest National product performance classification for lining materials laid down in the UK Building Regulation 20000.

- AS1530.3: Early Fire Hazard Properties: Simultaneous Determination of Ignitability, Flame Propagation, Heat Release:

Ignitability	Spread of Flame	Heat Evolved	Smoke Developed
0	0	0	2

- IMO Compliant: IMO Resolution A.653(16) As Amended by IMO Resolution MSC 61(67): Annex1: Part 5:

Parameter	Units	Specimen Number			Average
		1	2	3	
Heat for Ignition (Q _i)	MJm ⁻²	20.87	20.35	8.76	16.70
Heat for Sustained Burning (Q _{sb})	MJm ⁻²	20.87	20.35	8.45	16.60
Critical Flux at Extinguishment (CFE)	kW/m ²	44.00	43.20	39.20	42.10
Peak Heat Release Rate (q _p)	kW	0.55	0.31	1.00	0.6
Total Heat Release (Q _t)	MJ	0.11	0.02	0.21	0.1
Burning Drop	N/A	N/A	N/A	N/A	N/A

Exova Warrington Fire Test Report No. 306684

E. Ozone depleting substance: Nil

F. Volatile Organic Compounds (VOC): Nil



Important notice and disclaimer:

Specifications are subject to change without notice. Please contact us for the latest version. 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.

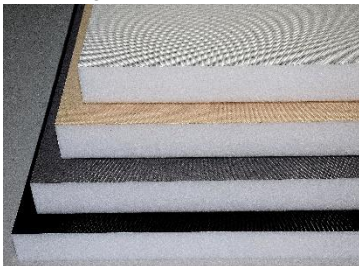
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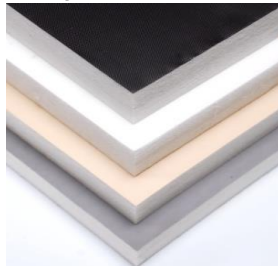
Related products:

- (1) *Megasorber FM: a lightweight and inherently fire-resistant acoustic panels with non-combustible sound absorbing Soundmesh G8 facing. BCA Group 1 fire classification as per AS5637.1-2015.*
- (2) *Megasorber P series are semi-rigid acoustic panels with non-combustible sound absorbing Soundmesh G8 facing; BCA Group 2 Classification as per AS5637.1-2015.*
- (3) *Megasorber Soundmesh G8 / G8A is a thin acoustic backing fabric specifically designed for perforated / slotted panels, perforated metal panels, timber slats and so on. It is non-combustible and BCA Group 1 fire classification as per AS5637.1-2015.*
- (4) *Megasorber FG series are light weight acoustic foam panels with a non-combustible sound absorbing Soundmesh G8 facing.*

Megasorber FM series



Megasorber P series



Megasorber Soundmesh G8A



Megasorber FG series

