

# Megasorber P: Sound Absorbing Panel

## Acoustic Panel with non-combustible Sound Absorbing Facing



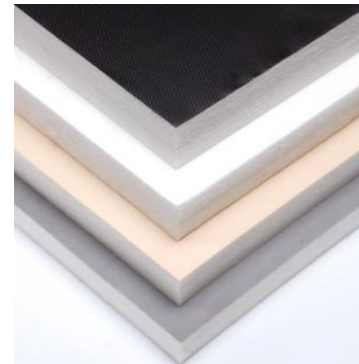
Product Codes: Megasorber P25, Megasorber P50 and Megasorber P100

### OVERVIEW

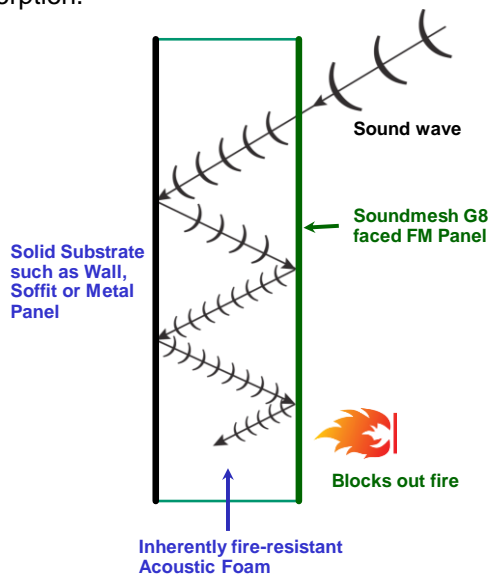
**Megasorber P** is a sound absorption panel consisting of a patented non-combustible sound absorbing facing Soundmesh® G8 and environmentally friendly acoustic polyester-wool.

- Superior acoustic performance**

The Megasorber FM panel utilises a patented non-combustible sound absorbing facing material 'Soundmesh G8' and has superior sound absorption. Soundmesh® G8 facing is a smart material which breaks the soundwave down into smaller components, then traps and dissipates the soundwave within the foam behind it. The acoustic impedance of G8 is tuned to maximise the sound absorption.



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



The patented sound absorption mechanism

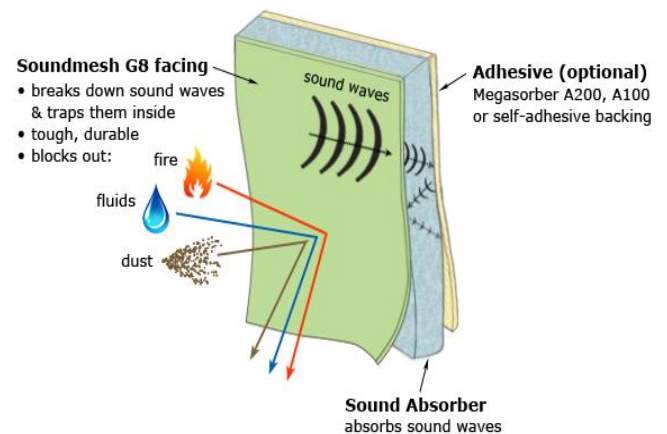
In contrast, traditional sound reflecting film facings (such as aluminium foil, mylar film and polyurethane film) have little or zero acoustic properties and block noise from being absorbed by the underlying foam

- BCA Group 2 fire rating**

**Megasorber P** has Building Code Australia (BCA) Group 2 fire rating as per AS ISO 9705 and AS5637.1-2015. It complies with IMO Resolution A653(16) requirements.

- Thermal insulation and easy to clean**

**Megasorber P** has high durability in hot and humid conditions. It also provides excellent thermal insulation. It has a protective, tough, durable and easy to clean surface. 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. The built-in fluid / water repellent property of Soundmesh G8 provides for easy cleaning and maintenance of the facing and makes it suitable for outdoor applications.



Fluid / water repelling G8 facing

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## FEATURES

- Superior sound absorption utilizing the patented technology
- BCA Group 2 fire classification with non-combustible facing
- IMO Resolution A653(16) compliant
- Tough, durable and water repellent facing (optional)
- Environmentally friendly with 100% recyclable acoustic polyester wool
- Long service life i.e., will not deteriorate when exposed to hot and humid conditions
- Easy to install – can be direct-fixed using Megasorber A200 adhesive
- Easy to clean: dirt marks or finger marks can be easily removed with Clean M8 block

## TYPICAL APPLICATIONS

Reverberation or echo noise reduction for

- Sport stadiums, multipurpose halls, call centres, school halls, commercial and office buildings
- Restaurants, bars and clubs
- Music rooms, recording studios, home theatres
- Indoor swimming pools and so on

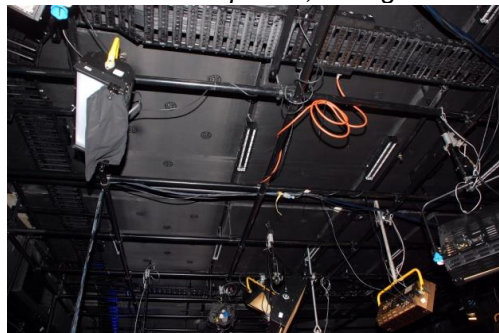
- *Megasorber P100, Melbourne Cricket Ground (MCG), walls and ceiling:*



- *Megasorber P50, ABC TV Studio Brisbane Headquarter office, ceiling:*



- *Megasorber P100, Recording Studios at ABC TV Brisbane Headquarter, ceiling and walls:*



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- Megasorber P50, Diamond Valley Sport Stadium, ceiling and walls:



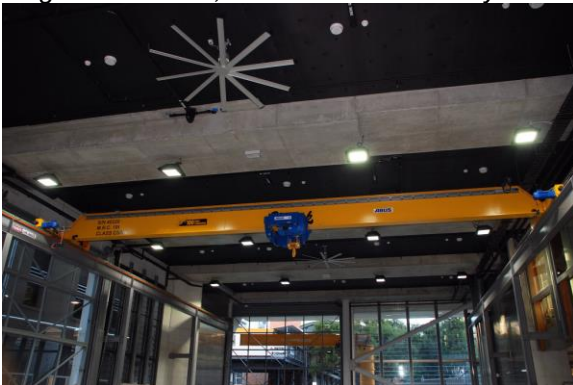
- Megasorber P50, St Mary's Multi-purpose Hall, ceiling and wall:



- Megasorber P50, Ann Street Museum, Brisbane, ceiling:



- Megasorber P100, Queensland University Advanced Engineering Building, Ceiling:



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**TECHNICAL SPECIFICATIONS**

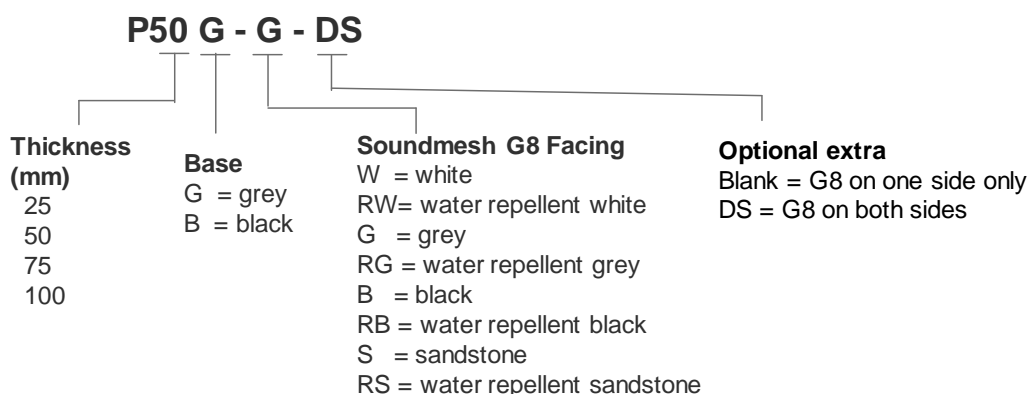
**1. Product codes:**

STANDARD PRODUCT	NORMINAL THICKNESS	SHEET SIZE
Megasorber P25	25mm	1.2m x 2.4m
Megasorber P50	50mm	1.2m x 2.4m
Megasorber P100	100mm	1.2m x 2.4m

Other available thicknesses (subject to MOQ): 75mm

**Note:**

- (1) Standard products are P25, P50 and P100. Megasorber P75 is non-standard product and made to order. Other thickness is available and subject to minimum order quantity.
- (2) Product code with optional extra:



For example:

- P50G-G: 50mm thick, grey base with grey Soundmesh G8 facing;
- P50G-G-DS: 50mm thick, grey base, grey Soundmesh G8 facing on both sides.
- P50B-B: 50mm thick, black base with black Soundmesh G8 facing;
- P50B-RB: 50mm thick, black base with water repellent black Soundmesh G8 facing;

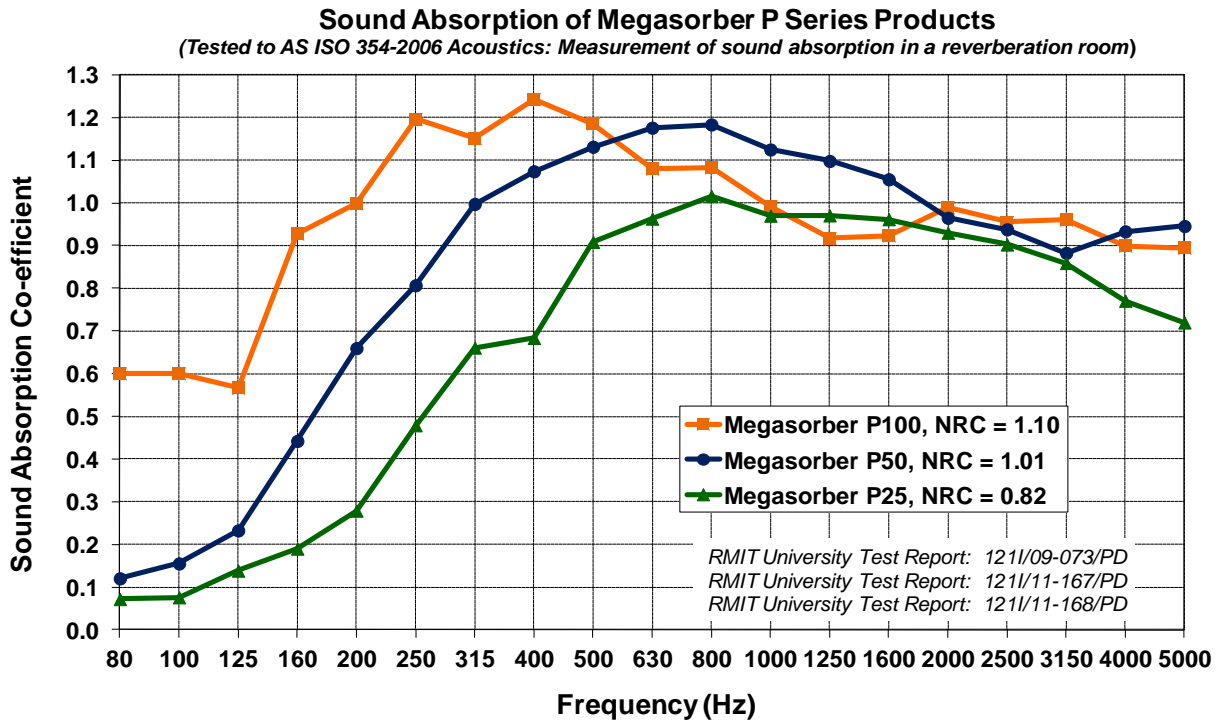
- (3) Standard facing colours are: white, grey and black; Sandstone is make to order. We can colour match to any customised colours. However, MOQ (minimum order quantity) applies.
- (4) The default base colour is grey. We do not recommend white Soundmesh G8 on white base, due to the potential blemish on the base. We recommend Megasorber FM panels if white Soundmesh G8 on white base is required.
- (5) Water / fluid\* repellent facing is recommended for easy surface cleaning.  
 \* Please note does not include petroleum or solvent based fluids.
- (6) G8 facing may have a stripy appearance and creases. Hairline creases may appear on the facing when handling. The creases do 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 ± 5% and sheet dimension tolerance is ± 1%.
- (9) Standard sheet size is 1.2m x 2.4m. Other sheet sizes available: 1200mm x 1200mm and 1200mm x 600mm (1195mm x 595mm if packed in boxes). We can cut panels to size, however, extra cutting charges apply.
- (10) Recommended adhesive is Megasorber A200 or Megasorber A100.

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**2. Acoustical Properties - typical results when tested in a reverberation room:**

Random Incidence Absorption Coefficient tested to AS ISO 354-2006: 'Acoustics: Measurement of sound absorption in a reverberation room'.



AS ISO 354-2006 Measurement Results

FREQUENCY	RANDOM INCIDENCE ABSORPT ON COEFFICIENT		
Hz	Megasorber P25	Megasorber P50	Megasorber P100
80	0.07	0.12	0.60
100	0.08	0.16	0.60
125	0.14	0.23	0.57
160	0.19	0.44	0.93
200	0.28	0.66	1.00
250	0.48	0.81	1.20
315	0.66	1.00	1.15
400	0.68	1.07	1.24
500	0.91	1.13	1.19
630	0.96	1.18	1.08
800	1.02	1.18	1.08
1000	0.97	1.12	0.99
1250	0.97	1.10	0.92
1600	0.96	1.06	0.92
2000	0.93	0.96	0.99
2500	0.90	0.94	0.95
3150	0.86	0.88	0.96
4000	0.77	0.93	0.90
5000	0.72	0.95	0.89
<b>NRC</b>	<b>0.82</b>	<b>1.01</b>	<b>1.10</b>
$\alpha_w$	<b>0.75(M)</b>	<b>1.00</b>	<b>1.00</b>

Note: NATA certified RMIT University test report No. 1211/09-074/PD, 1211/11-168/PD and 1211/11-169/PD

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The Practical Sound Absorption Coefficients in accordance to AS ISO 11654-1997 “Acoustic: Sound Absorbers for Use in Buildings – Rating of sound absorption” and NRC (Calculated in accordance to ASTM C423-90A) are:

Practical Sound Absorption Coefficients and NRC

Frequency (Hz)	125	250	500	1000	2000	4000	NRC
Megasorber P25	0.15	0.45	0.85	1.00	0.95	0.80	0.80
Megasorber P50	0.30	0.80	1.00	1.00	1.00	0.90	1.00
Megasorber P100	0.70	1.00	1.00	1.00	0.95	0.90	1.10

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.

**3. Thermal properties:**

- 1) Thermal Operating Range: -40°C to + 120°C
- 2) Thermal Conductivity: 0.033W/mK
- 3) Thermal properties - typical R values:

Product code	Megasorber P25	Megasorber P50	Megasorber P75	Megasorber P100
Typical R value*	0.8	1.5	2.2	3.0

\*Note: calculated value based on thermal conductivity.

**4. Flammability:**

- AS ISO 9705:2003(R2016) and AS 5637.1:2015: BCA (Building Code Australia)

Criteria	Results
Group number	2
SMOGR <sub>ARC</sub> (in m <sup>2</sup> /s <sup>2</sup> × 1000)	5.1

- AS ISO 9705:2003(R2016) and C/VM2: New Zealand

Criteria	Results
Group number	2 – S
Average smoke production rate (0 to 10 minutes) (in m <sup>2</sup> /s)	1.1

- 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 <sub>i</sub> )	MJm <sup>-2</sup>	20.87	20.35	8.76	16.70
Heat for Sustained Burning (Q <sub>sb</sub> )	MJm <sup>-2</sup>	20.87	20.35	8.45	16.60
Critical Flux at Extinguishment (CFE)	kW/m <sup>2</sup>	44.00	43.20	39.20	42.10
Peak Heat Release Rate (q <sub>p</sub> )	kW	0.55	0.31	1.00	0.6
Total Heat Release (Q <sub>t</sub> )	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

**5. Ozone depleting substance: Nil**

**6. Volatile Organic Compounds (VOC): Nil**

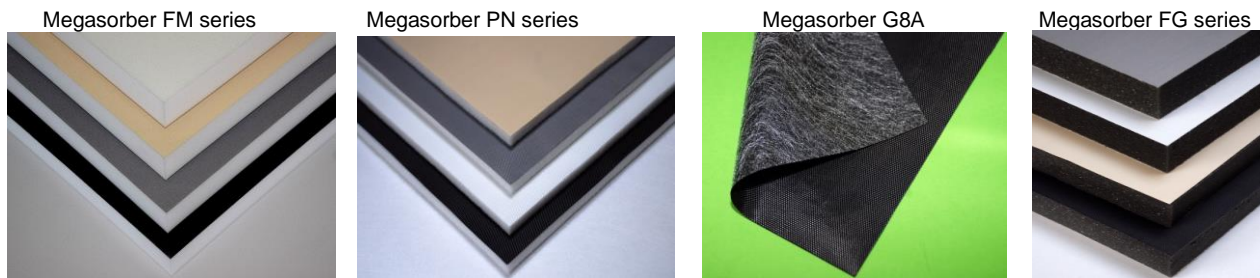
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**Related products:**

- (1) Megasorber FM: a lightweight inherently fire-resistant acoustic panels with fireproof sound absorbing Soundmesh G8 facing. It meets with AS/NZS 5637.1 Group 1 fire rating.
- (2) Megasorber PN series are acoustic boards; It is designed as acoustic backing for timber slats, metal battens, perforated and slotted panels and so on. It meets with AS/NZS 5637.1 Group 2 fire rating.
- (3) Megasorber Soundmesh G8 (or G8A) is a thin acoustic backing material specifically designed for perforated / slotted panels, perforated metal sheets and timber slats. It is non-combustible. It meets with AS/NZS 5637.1 Group 1 fire rating.
- (4) Megasorber FG series are light weight acoustic foam panels with a fireproof sound absorbing Soundmesh G8 facing.



Please contact us or go to our website [www.megasorber.com](http://www.megasorber.com) for more details.



**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. "Fireproof" and "non-combustible" mean product has BS 476 Part 4 "Non-combustible" Classification.

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