

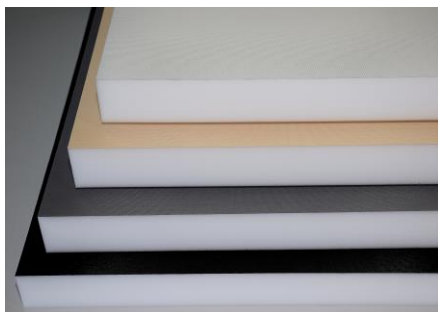
Megasorber FM: Sound Absorbing Panel Lightweight & Inherently Fire-Resistant

Product Codes: Megasorber FM25, FM50 and FM100



Overview

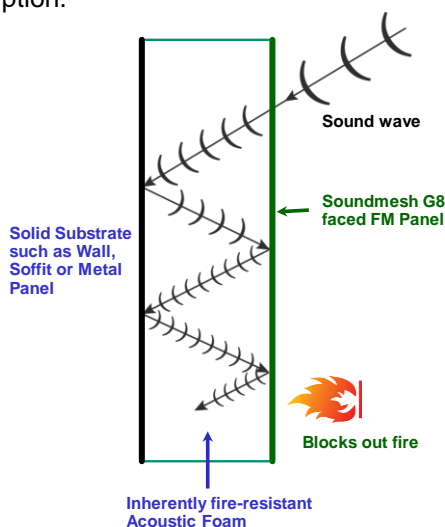
Megasorber FM sound absorbing panel provides superior acoustic performance. It is inherently fire-resistant, lightweight and self-supporting.



Megasorber FM with white, sandstone, grey and black Soundmesh G8 facing.

- **Superior acoustic performance**

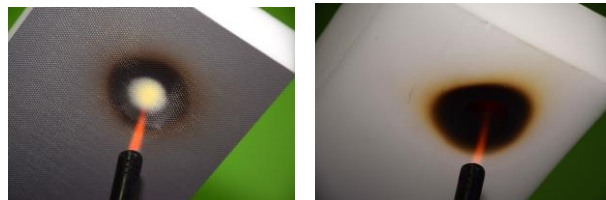
The Megasorber FM panel utilises a patented non-combustible sound absorbing facing material 'Soundmesh G8' to achieve superior sound absorption. Soundmesh® G8 facing is a smart material which breaks the soundwave down into smaller components, then traps and dissipates the soundwave within the foam behind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



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.

- **Highest fire rating (BCA Group 1)**



No ignition, no spread of flame and no drips when exposed to fire.

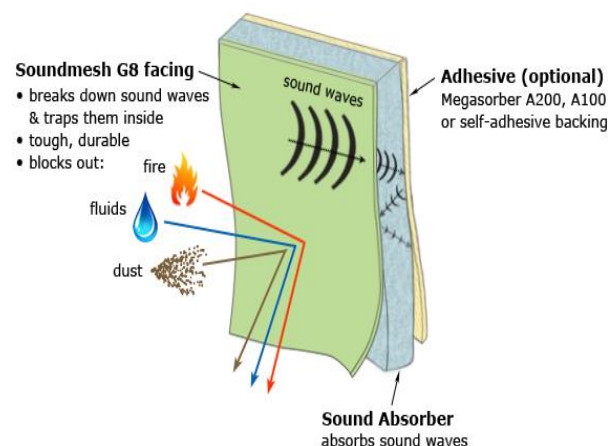
Megasorber FM has Building Code Australia (BCA) Group 1 fire rating as per AS5637.1-2015 and ISO 5660 Group 1 fire classification.

- **Exceptional high thermal insulation**

Megasorber FM provides exceptional thermal insulation, and it is one of the most effective lightweight thermal insulation materials.

- **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** Soundmesh G8 is also available, making it ideal for applications where the product could be exposed to weather elements.



Water / Fluid Repellent G8 facing (optional)

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KEY FEATURES

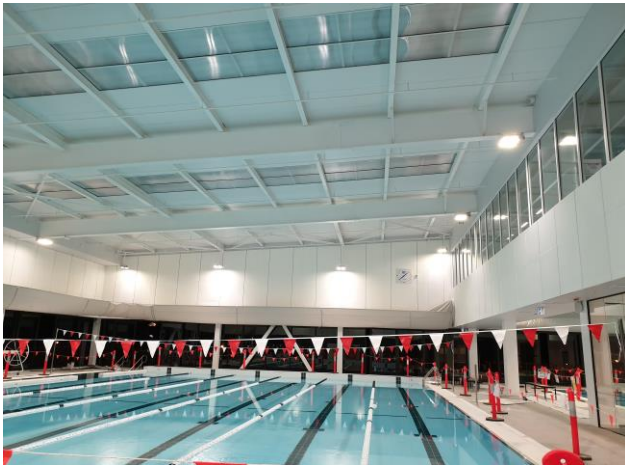
- Superior sound absorption using patented technology
- Inherently fire-resistant sound absorbing panel
- BCA Group 1 fire classification as per AS 5637.1
- ISO 5660 Group 1 fire classification
- Light weight and self-supporting
- Tough, durable and fluid / water repellent facing (optional)
- Excellent heat, aging and UV resistant properties
- Hydrolysis resistant
- Easy to cut and install
- Easy to clean facing: dirt and dust can be easily removed with Clean M8 block

TYPICAL APPLICATIONS

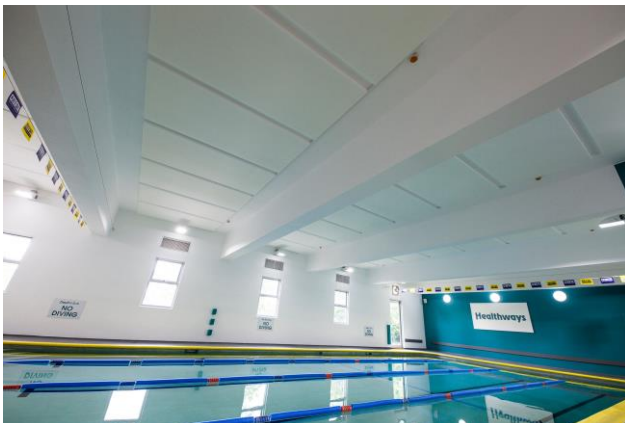
Reverberation or echo noise reduction for:

- Sports stadiums, multipurpose halls, school halls
- Direct-fix to concrete soffits to provide acoustic and thermal insulation
- Music rooms, recording studios, home theatres
- Call centres, commercial and office buildings
- Restaurants, bars and clubs

(1) Megasorber FM50: Australian National University (ANU) Aquatic Centre; Walls and ceiling; direct-fix



(2) Megasorber FM25: Healthways swimming pool; Ceiling; direct-fix with express finish



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(3) Megasorber FM50: Berwick Grammar school; Walls and ceiling; direct-fix with express finish



(4) Megasorber FM100: Church in Box Hill, Melbourne, Walls and ceiling; direct-fix with express finish



(5) Megasorber FM50: Monash University TechSchool; Walls and ceiling; Top-hats and T-bars.



(6) Other projects:



TECHNICAL SPECIFICATIONS

1. Product codes:

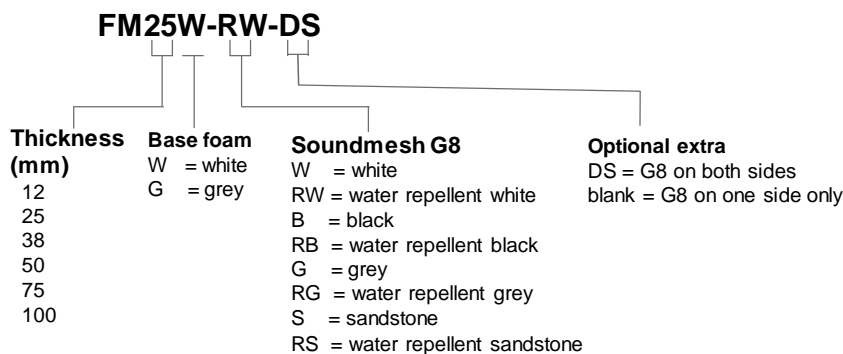
- Standard thickness: 25mm, 50mm & 100mm

PRODUCT CODES	THICKNESS	PANEL SIZE
Megasorber FM25	25mm	1.2m x 2.4m
Megasorber FM50	50mm	1.2m x 2.4m
Megasorber FM100	100mm	1.15m x 2.35m

- Other thickness available: (minimum order quantity applies) 12mm, 38mm & 75mm

Note:

- Base foam is either white or light-grey;
- 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.
- Product code with optional extra:



For example:

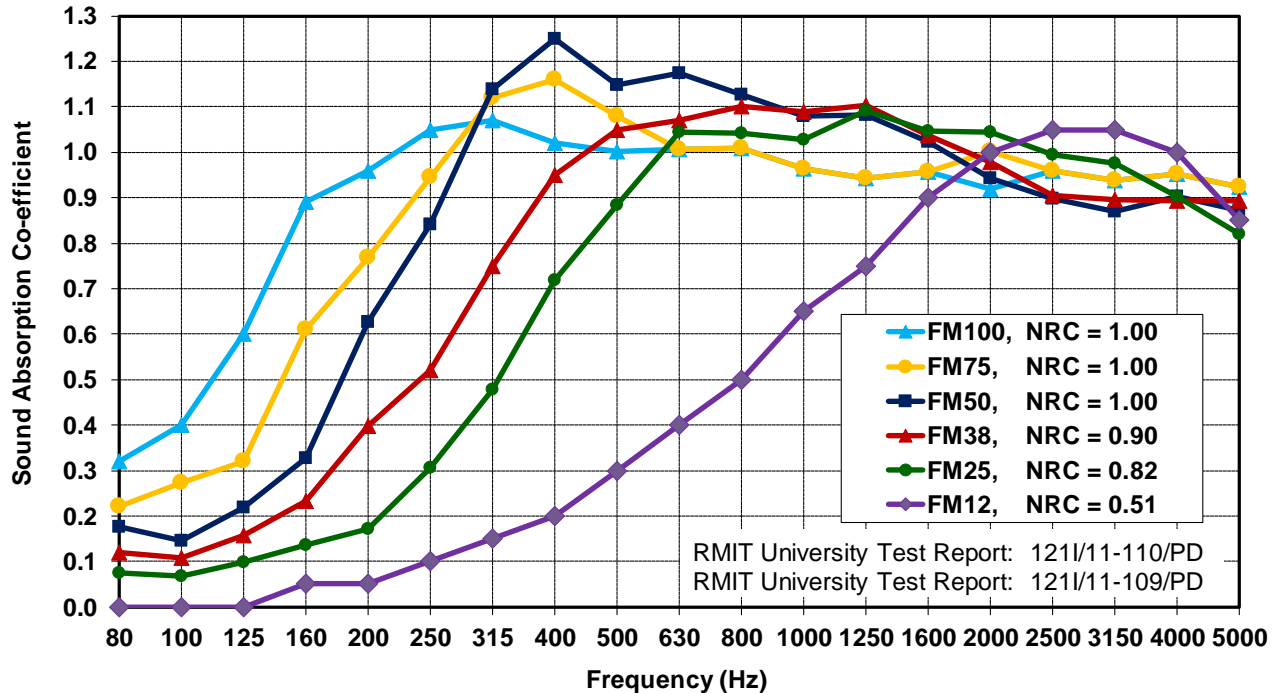
- FM25W-RW: 25mm thick, white base with water repellent white Soundmesh G8 facing;
 - FM25W-RW-DS: 25mm thick, white base with water repellent white Soundmesh G8 facing on both sides.
- G8 facing may have a stripy appearance and creases. Hairline creases may appear on the facing when handling. The creases do not affect the acoustic performance.
 - There are colour variations between batches, whilst we take every care to minimise batch to batch variation in some instances variation may be unavoidable and will occur.
 - Dimensional change will occur in the FM foam substrate with change in relative humidity and temperature, this may cause creasing on the Soundmesh G8 facing. The creases do not affect the acoustic performance.
 - Thickness tolerance is $\pm 5\%$ and sheet dimension tolerance is $\pm 1\%$.
 - 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.
 - Water / fluid* repellent facing is recommended for easy surface cleaning.
* We do not recommend cleaning using petroleum or solvent based fluids.
 - Recommended adhesive is Megasorber A200 or Megasorber A100.
 - Clean surface with Megasorber Clean M8 block.

2. Acoustic 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'

Sound Absorption of Megasorber FM Range Products

(Tested to AS ISO 354-2006 Acoustics: Measurement of sound absorption in a reverberation room)



AS ISO 354-2006 Measurement Results

FREQUENCY	RANDOM INCIDENCE ABSORPTION COEFFICIENT					
Hz	Megasorber FM12	Megasorber FM25	Megasorber FM38	Megasorber FM50	Megasorber FM75	Megasorber FM100
100	0.00	0.07	0.11	0.15	0.27	0.40
125	0.00	0.1	0.16	0.22	0.32	0.60
160	0.05	0.14	0.23	0.33	0.61	0.89
200	0.05	0.17	0.40	0.63	0.77	0.96
250	0.10	0.31	0.52	0.84	0.95	1.05
315	0.15	0.48	0.75	1.14	1.12	1.07
400	0.20	0.72	0.95	1.25	1.16	1.02
500	0.30	0.88	1.05	1.15	1.08	1.00
630	0.40	1.04	1.07	1.17	1.01	1.01
800	0.50	1.04	1.10	1.13	1.01	1.01
1000	0.65	1.03	1.09	1.08	0.96	0.96
1250	0.75	1.09	1.10	1.08	0.94	0.94
1600	0.90	1.05	1.04	1.02	0.96	0.96
2000	1.00	1.04	0.98	0.94	1.00	0.92
2500	1.05	0.99	0.91	0.9	0.96	0.96
3150	1.05	0.98	0.90	0.87	0.94	0.94
4000	1.00	0.9	0.89	0.9	0.95	0.95
5000	0.85	0.82	0.89	0.87	0.92	0.92
NRC	0.51	0.82	0.90	1.00	1.00	1.00
α_w	0.40(H)	0.60(MH)	0.90	1.00	1.00	1.00

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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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:

Frequency (Hz)	125	250	500	1000	2000	4000	NRC
Megasorber FM12	0.00	0.10	0.30	0.65	1.00	1.00	0.51
Megasorber FM25	0.10	0.30	0.88	1.00	1.00	0.90	0.82
Megasorber FM38	0.16	0.52	1.00	1.00	0.98	0.89	0.90
Megasorber FM50	0.25	0.84	1.00	1.00	0.95	0.90	1.00
Megasorber FM75	0.32	0.95	1.00	0.96	1.00	0.95	1.00
Megasorber FM100	0.60	1.00	1.00	0.96	0.92	0.95	1.00

3. Physical properties:

- 1) Base foam colour: *White or light grey;*
- 2) Thermal Conductivity ASTM C177 *0.032W/mK*
- 3) Density, weight and thermal insulation (R value) properties:

Product code	FM12	FM25	FM38	FM50	FM75	FM100
Nominal Density (kg/m ³)	25	16	13	12	11	10
Nominal Weight (kg/m ²)	0.30	0.40	0.50	0.60	0.80	1.0
Typical R value*	0.4	0.8	1.2	1.6	2.4	3.2

*Note: calculated value based on thermal conductivity.

4. Flammability:

- (1) AS 5637.1 Product Group Number Classification:

BCA Classification	Average Specific Extinction Area
Group 1	98.3 m ² /kg

- (2) ISO5660.1-2015: Reaction to Fire Tests - Heat Release Smoke Production and Mass Loss Rates. *Group 1 Classification.*

5. Ozone depleting substance: *Nil*

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

Important notice and disclaimer:

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

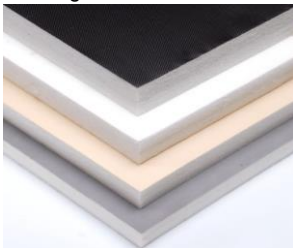
Patented Soundmesh G8: U.S. Patent No. 8167085, Australian Patent No. 2009206197. The data listed in this data sheet are typical or average values based on tests conducted by independent laboratories or by the manufacturer.

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.

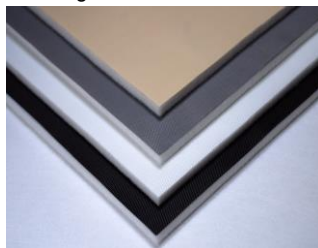
Related products:

- (1) Megasorber P series are acoustic polyester panels with a fireproof sound absorbing Soundmesh G8 facing. BCA Group 2 fire classification as per AS 5637.1-2015.
- (2) Megasorber PN series are thin acoustic boards; It is designed as acoustic backing for timber slats, metal battens, perforated and slotted panels and so on. BCA Group 2 fire classification as per AS 5637.1-2015.
- (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. BCA Group 1 fire classification as per AS 5637.1-2015.
- (4) Megasorber FG series are light weight acoustic foam panels with a fireproof sound absorbing Soundmesh G8 facing.

Megasorber P series



Megasorber PN series



Megasorber G8 / G8A



Megasorber FG series



Please contact us or go to our website www.megasorber.com for more details.

