technical data sheet

FM

Sound Absorbing Panel

FM25 / FM50 / FM100

megasorber®

FM

Sound Absorbing Panel

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

The Megasorber FM panel utilises a patented noncombustible sound absorbing facing material ‘Soundmesh G8’ to achieve superior sound absorption. Soundmesh® G8 facing 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 sound absorption.

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.

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

Megasorber FM has Building Code Australia (BCA) Group 1 fire rating and ISO 5660 Group 1 fire classification. It has EN45545-2 Classification of R1 for HL1, HL2, HL3 Hazard Level for Fire protection on railway vehicles Part 2: Requirements for fire behaviour of materials and components. The Soundmesh G8 facing is non-combustible and has a high-temperature resistance up to 550°C.

Exceptional thermal insulation

Megasorber FM provides exceptional thermal insulation, and it is one of the most effective lightweight thermal insulation materials. Megasorber FM foam has excellent heat resistance and can withstand up to 250°C.

Colours

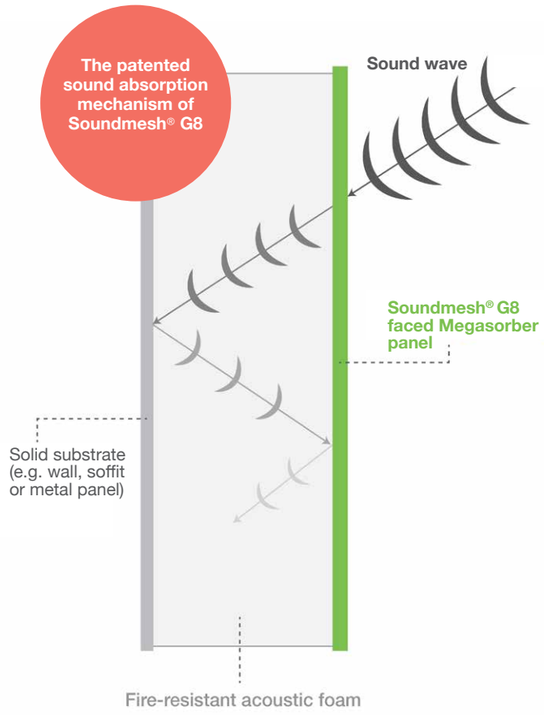
Soundmesh G8 colour facing options.

Black | Dark Grey* | Grey | Aquatic* | Sandstone* | White

** Colour subject to availability.*

Tough, durable & easy to clean

Megasorber FM has high durability in hot and humid conditions. The Soundmesh G8 facing is tough and strong. Dirt marks on the Soundmesh G8 facing can be easily removed with Megasorber Clean M8 cleaning blocks. A water repellent G8 facing option is also available. FM is suitable for applications exposed to the elements.



tough, durable superior sound absorption

Key Features

Superior sound absorption using patented technology.

Inherently fire-resistant sound absorbing panel.

AS 5637.1 BCA Group 1 fire classification.

ISO 5660 Group 1 fire classification.

EN45545-2 meets all requirements of R1 for a HL1, HL2, HL3 Hazard Level Classification for fire protection on railway vehicles.

Light weight.

Water repellent facing (optional).

Splash resistant to water and engine fluid.

Easy to cut and install.

Easy to clean facing: dirt and dust can be easily removed with Clean M8 block.

Excellent heat and ageing resistant properties.

Applications

High-efficiency sound-absorbing material for noise reduction in various applications:

Acoustic lining for compressors, blowers, generator set enclosures.

Soundproofing lining for machinery, equipment, electronic and electrical equipment, ventilation, or air ducts.

Acoustic lining plant rooms, equipment rooms.

Engine bay insulators and interior sound absorption for buses, trucks, cars and trains.

Acoustic and thermal lining for railway vehicles.

Marine engine room noise reduction.

Technical Specifications

1. Product Codes

Standard thickness 25mm, 50mm, 100mm

Product Code	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:

1) Base foam is either white or light-grey;

2) Standard facing colours are: white, grey and black; Aquatic, Dark Grey and Sandstone are made to order. We offer custom cutting to size, please note that cutting charges will apply. Prices will be quoted on application.

3) Product code with optional extra:

FM25W-RW-DS

Thickness (mm)
12
25
38
50
75
100

Base Foam
W = White
G = Grey

Soundmesh G8
RW = Water repellent white
B = Black
RB = Water repellent black
G = Grey
RG = Water repellent grey
DG = Dark Grey
RDG = Water repellent dark grey
RS = Water repellent sandstone
RQ = Water repellent aquatic

Optional extra
DS = G8 on both sides
Blank = G8 on one side only

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.

4) 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.

5) 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.

6) 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.

7) Thickness tolerance is ± 5% and sheet dimension tolerance is ± 1%.

8) 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.

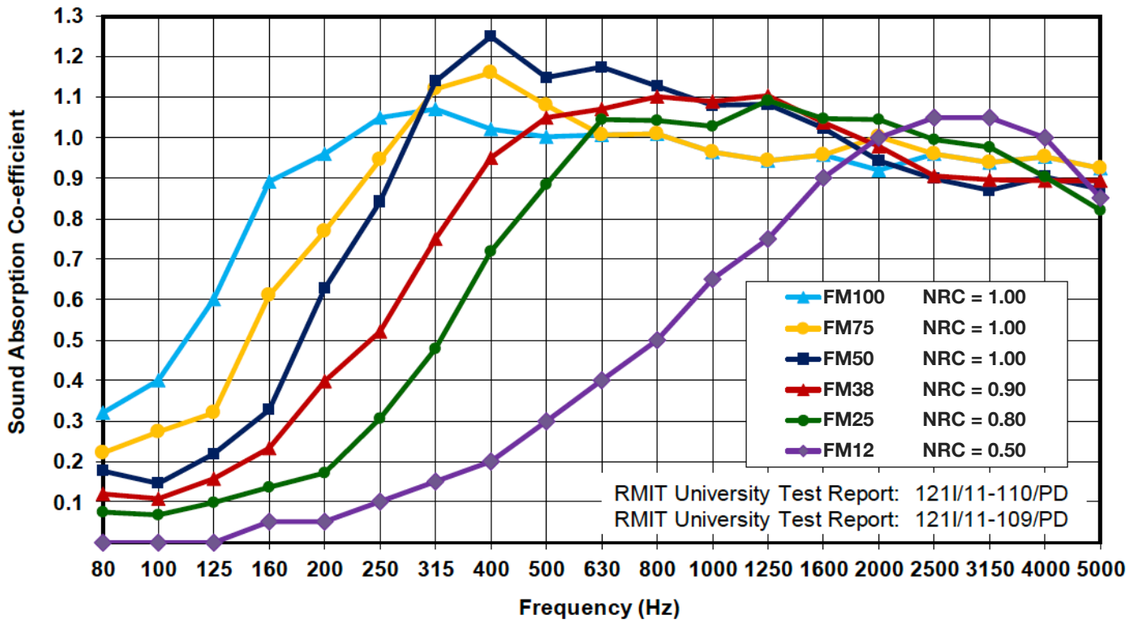
9) Water repellent facing is recommended for easy surface cleaning.

10) Recommended adhesive is Megasorber A200 or Megasorber A100.

11) Clean surface with Megasorber Clean M8 block.

2. Acoustic Properties

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 Absorption Coefficient					
Hz	**FM12**	**FM25**	**FM38**	**FM50**	**FM75**	**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	**0.5**	**0.8**	**0.90**	**1.00**	**1.00**	**1.00**
a_w	***0.40(H)***	***0.60(MH)***	***0.90***	***1.00***	***1.00***	***1.00***

3. Physical Properties

1) Base foam colour: White or light grey;

2) Density, weight and thermal insulation (R value) properties

Product Code	FM12	FM25	FM38	FM50	FM75	FM100
Nominal density (kg/m³)	25	16	13	12	11	10
Nominal weight (kg/m²)	0.30	0.40	0.50	0.60	0.80	1.0
R value*	0.35	0.74	1.12	1.47	2.21	2.94

** Calculated value based on thermal conductivity @ 15°C*

4. Flammability

1) AS 5637.1 - 2015 Determination of fire hazard properties:

Product Group Number Classification	Average Specific Extinction Area
Group 1	98.3 m²/kg

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

3) AS1530.3.1989: Early Fire Hazard Properties: Simultaneous Determination of Ignitability, Flame Propagation, Heat Release:

Ignitability	Spread of Flame	Heat Evolved	Smoke Devloped
0	0	0	4

4) BS 476-6:1989+A1:2009 Fire tests on building materials and structures – Fire propagation of products:

Fire propagation index, I	Sub-index, i1	Sub-index, i2	Sub-index, i3
7.4	5.3	2.1	0.1

5) BS 476-7:1997 Fire tests on building materials and structures – Surface spread of flame of products Classification: Class One.

6) EN45545-2:2013+A1:2015 Railway Applications – Fire protection on railway vehicles Part 2: Requirements for fire behaviour of materials and components. Meets the requirements of R1 for HL1, HL2, HL3 Hazard Level Classification.

5. Volatile Organic Compounds (VOC)

ASTM D5116 "Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Material/ Products": 0.016 mg/m²/hr (well below GreenTag requirement limit of 0.5mg/m²/hr).

Related Products

Megasorber P are acoustic polyester panels with a fireproof sound absorbing Soundmesh G8 facing. BCA Group 2 fire classification as per AS 5637.1-2015.

Megasorber PN are thin acoustic boards designed as acoustic backing for timber slats,metal battens, perforated and slotted panels. BCA Group 2 fire classification as per AS5637.1-2015.

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.

megasorber.com

AUSTRALIAN MADE AND OWNED

megasorber.com

megasorber®

Building 3, 621 Whitehorse Road
Mitcham, Victoria, Australia 3132

E info@megasorber.com

T + 61 3 9077 2918

ACN 096 454 278 / ABN 13 096 454 278