

SOUNDSTEEL™ MPM

constrained layer, viscoelastic steel sandwich laminate

Soundsteel MPM is a fully damped steel composite comprising of two outer layers of steel laminated together using a layer of a viscoelastic polymer to form the laminate. Using the “constrained layer” principle, the function of the viscoelastic interlayer is to damp disturbing structure-borne sound.

Soundsteel MPM is free from resonance and coincidence phenomena which often detract from the performance of other acoustic insulation materials.

Soundsteel MPM can be used to fabricate acoustic doors, laundry and garbage chutes, ducts, enclosures, extraction hoods, and automotive components such as valve covers & oil sumps. Because of the steel base material, Soundsteel MPM can be used in severe environments where other damping materials cannot withstand.

The standard product is supplied with an electro-galvanised finish, and available in various metals and surface finishes. Using electro-galvanised, cold-rolled, low carbon steel allows the laminate to be used as a structural material in equipment construction.

Soundsteel MPM is also available with a choice 304 and 316 stainless steel grades, with a surface finish of either polished, brushed or polyethylene (PE) coating for additional scratch resistance. When exposed to harsh environments, SS316 offers considerably high heat and corrosion resistance when compared to other grades of stainless steels.

Note: Powder coated panels should not be bent. Bending should be completed on plain panels and painted on site. We recommend conducting trials on small sample pieces first.

VOC, ODP, HEALTH AND SAFETY

Soundsteel MPM is non-toxic and safe to handle by methods prescribed in the Safety Data Sheet.

SPECIFICATIONS

Colour	Plain, plain galvanised finish, or powder coated
Available	Standard sheet size: 1.22 x 2.44 m (4 x 8 ft) Standard thicknesses: 1.2, 1.6 and 2 mm (0.05, 0.06 and 0.08 in) Various configurations of metal thicknesses available from 1 to 6 mm (0.04 to 0.2 in)
	Custom sizes, colours and/or thicknesses available depending on MOQ



applications

- Engine rooms for high speed craft/vessels
- Machinery and equipment, compressor and generator set enclosures
- Acoustic hoods and chutes
- Conveyor systems
- Crushers / Granulators
- Coin counters
- Air conditioner casings
- Automotive sumps and panels
- Acoustic wall panels and doors
- LNG cladding

features

- Lightweight while providing maximum damping performance even at minimum thickness
- Complies to IMO FTP 2010 - low spread of flame
- Can be used as part of the “main structure”
- Able to cut, die form into complex shapes and join just like plain aluminium
- Insulates against airborne sound, impact and vibration
- Able to be painted & powder coated - best results from the manufacturer for powder coating
- Effective “in-structure damping”
- No need for external damping materials
- Reduces or eliminates the need for the use of external isolators
- Broad temperature range: -40 to 110 °C (-40 to 230 °F)
- Able to fabricate using conventional machine shop tools
- Available with a choice of polished, electro-galvanised, brushed or polyethylene (PE) coated surface finishes



PRODUCT SPECIFICATION

Product	Thickness	Standard sheet size	Approximate Surface Density	Transmission Loss	Recommended Maximum Service Temperature
Soundsteel MPM 1200	1.2 mm (0.05 in)	1.22 x 2.44 m (4 x 8 ft)	8.7 kg/m ² (1.8 lb/ft ²)	Rw 29 / STC 29*	110 °C (230 °F)
Soundsteel MPM 1600	1.6 mm (0.06 in)		11.8 kg/m ² (2.4 lb/ft ²)	Rw 30 / STC 30**	
Soundsteel MPM 2000	2 mm (0.08 in)		14.9 kg/m ² (3.1 lb/ft ²)	Rw 33 / STC 33*	

Tolerances: Dimensions & Weight: ±10%. Other grades/thicknesses are available, please enquire for more information.

*Published transmission loss results have been calculated using transmission loss prediction software with a general tolerance of ±3 dB. Full prediction data can be shared upon request.

**Test report ATF-142

MATERIAL PROPERTIES

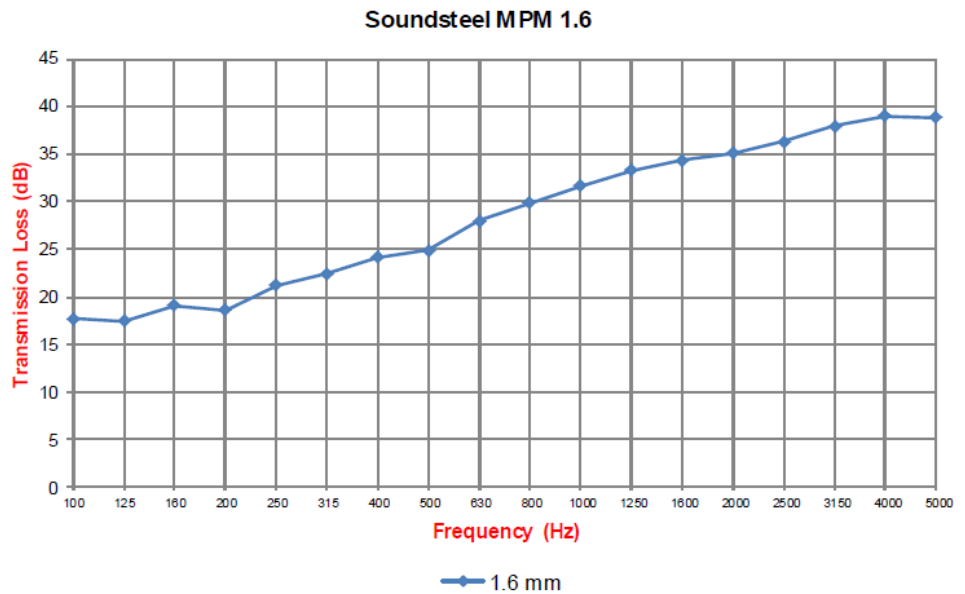
Test method	Property	Report no.	Results
IMO FTP Annex 1 Part 5	Surface flammability	394458	Complies for bulkhead, walls, floors and ceiling linings
IMO FTP Annex 2	Smoke and toxicity	394458	

*Soundsteel MPM 1.6 mm thickness

ACOUSTIC PERFORMANCE

Frequency (Hz)	Soundsteel MPM 1.6 mm
100	17.7
125	17.4
160	19.1
200	18.6
250	21.2
315	22.4
400	24.1
500	24.9
630	28.0
800	29.9
1000	31.7
1250	33.3
1600	34.4
2000	35.1
2500	36.3
3150	38.0
4000	39.0
5000	38.9
STC	30
R _w	30

Transmission Loss (Tested to AS1191 | NAL Report No. ATF-142)



For further information and contact details, please visit our website pyroteknc.com

Caveats: Specifications are subject to change without notice. The data in this document is typical of average values based on tests by independent laboratories or by the manufacturer and are indicative only. Materials must be tested under intended service conditions to determine their suitability for purpose. The conclusions drawn from acoustic test results are as interpreted by qualified independent testing authorities. Nothing here releases the purchaser/user from responsibility to determine the suitability of the product for their project needs. Always seek the opinion of your acoustic, mechanical and fire engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek is not responsible for differing outcomes from using their products. Pyrotek disclaims any liability for damages or consequential loss as a result of reliance solely on the information presented. No warranty is made that the use of this information or of the products, processes or equipment to which this Information Page refers will not infringe any third party's patents or rights. DISCLAIMER: This document is covered by Pyrotek standard Disclaimer, Warranty and © Copyright clauses. See pyroteknc.com/disclaimer.

