

SOUNDALLOY™ MPM

constrained layer metal composite

Soundalloy™MPM is a damped aluminium composite comprising two layers of aluminium 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.

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

Using aluminium sheet allows the laminate to be used as a structural material in equipment construction.

Soundalloy 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.

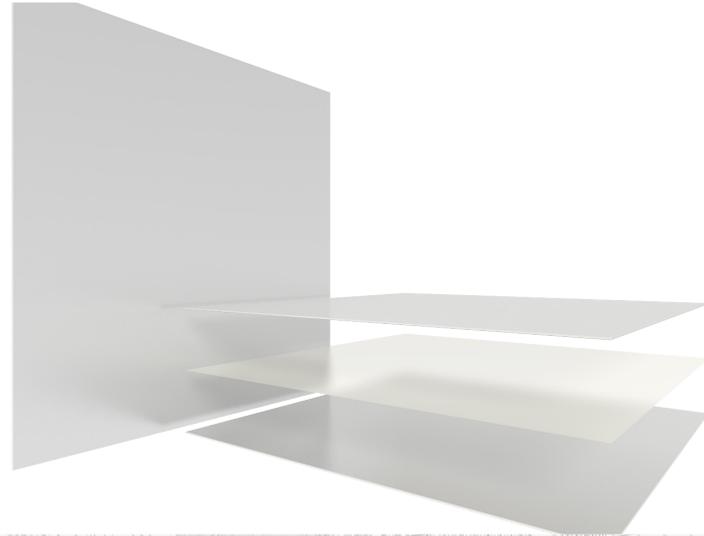
Because of the aluminium base material, Soundalloy MPM can be used in severe environments which other materials cannot withstand.

Other metals such as stainless steel and EG steel can be substituted for aluminium.

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 samples pieces first.

SPECIFICATIONS

Colour	Silver (Aluminium)
Available	Sheet size: 1200 mm x 2400 mm
	Custom 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

- Maximum damping for minimum thickness
- Complies to IMO FTP 2010 - low spread of flame
- Can be used as part of the “main structure”
- Cut, form and join just like plain aluminium
- Insulates against air-borne 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 need for use of external isolators
- Lightweight damped structures
- Broad temperature range (-40oC to 110oC)
- Able to fabricate using conventional machine shop tools
- Able to be die formed into complex shapes
- Various configurations of metal thicknesses available from 1mm - 6mm.



PRODUCT SPECIFICATIONS

Product	Viscoelastic layer	Finish	Thickness (mm)	Sheet size (mm)	Recommended max service temp	Surface density (kg/m ²)
Soundalloy MPM 1600	Acrylic	Aluminium	1.6	1200 x 2400	110°C	4.1
Soundalloy MPM 2100			2.1	1200 x 2400		5.4

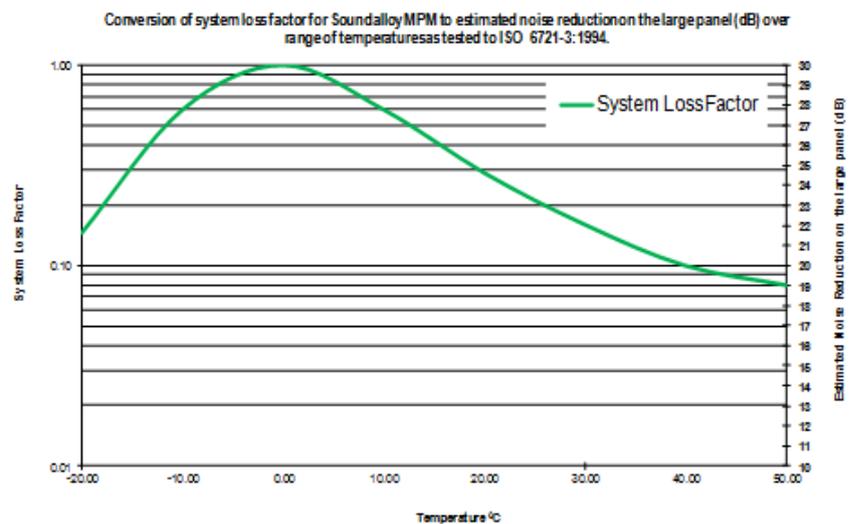
MATERIAL PROPERTIES

Test method	Index	Report no.	Results	Description
IMO FTP 2010	CFE: Critical flux at extinguishment Qsb: Heat of sustained burning Qt: Total heat released Qp: Peak heat release rate	Resolution MSC.307(88) Annex 1 Part 5 (Report No. 323596)	>50.5kW/m ² >30.3MJm ⁻² <0.01kW <0.01MJ Meets all low flame spread requirements for bulkhead, wall, ceiling and floor coverings	Surface flammability of bulkhead, wall, ceiling, floor covering
EC Type Examination Certificate Module B (MED B) + Module D (MED D)	-	Certificate No. 164.112/1121/ WCL MED0362TE; MEDD000015N	Complies. USCG type approval granted	WHEELMARK
DNV-GL Type approval, & Transportation Canada type approval to requirements of TP 14612	Surface materials of low flame spread	Certificate No. F-21141	Complies for Offshore Standards, SOLAS & recognized by Transport Canada.	Suitable for use on DNV-GL surveyed and Canadian flag state vessels.

ACOUSTIC PERFORMANCE

Temperature °C	System loss factor
-20	0.15
-10	0.60
0	1.00
10	0.60
20	0.29
30	0.16
40	0.10
50	0.08
Maximum estimated noise reduction (dB)	30.0

System loss factor is a dimensionless figure representing how well a particular system is damped. Standard ASTM E756-23/ISO 6721-3 is used to test for system loss factor. A system is a combination of the substrate, be it steel, aluminium or fibreglass and the damping material itself. System loss factor is system specific, hence the composition of the tested system needs to be provided.



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 or mechanical 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.

