

SORBERBARRIER M

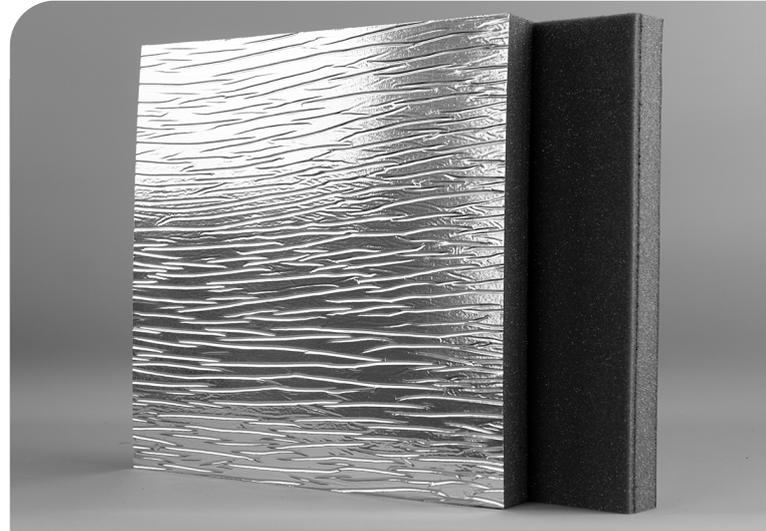
metallised polyester faced absorber-barrier composite solution

Sorberbarrier M is a unique acoustic composite product with a durable impervious metallised polyester film facing. The facing provides mechanical protection and is impermeable to contamination from dust, oil, liquids or sprays making it highly suitable for application in light rail, recreational crafts and general OEM partial enclosures.

Sorberbarrier's high-performance is achieved by placing the mass barrier between two layers of absorbing foam. The composite product consists of the flexible mass loaded vinyl, Wavebar®, and Sorberfoam. It keeps the noise barrier separate from the structure to which it is bonded, allowing flexibility to reflect and absorb the transmission of sound.

Tests have revealed that increasing the thickness of the foam separating the barrier improves the product's performance in some frequencies without affecting the overall weight.

Sorberbarrier M's surface absorbs sound in a broad range of frequencies, and when combined with a mass barrier, it provides effective noise reduction. The product is engineered to offer a versatile product for controlling noise in the market place.



applications

- Recreation crafts and smaller yachts
- Machinery and equipment enclosures
- Compressor and generator set enclosures
- Hydraulic pump enclosures
- Light rail, car, boat, truck and bus compartments

features

- Multi-function product: An absorber and barrier in one
- Metallised polyester facing allows sound absorption in critical high and mid-frequency region
- The lightweight, semi-decorative facing is highly reflective for enhanced lighting
- Impermeable to contamination from dust, oils, liquids, fuels or sprays
- No ozone-depleting substances generated during manufacture
- Free from formaldehyde, phenolic resins and irritating fibres
- The foam is engineered to substantially resist degradation (foam rot) more than traditional acoustic foam
- Available with self-adhesive backing for ease of installation
- Quick and easily installed in challenging places
- Easy to cut, adhere or mechanically fasten into position
- Custom designs available, profile cut into 2D or 3D shapes
- Can be constructed with other absorption products such as Sorberpoly and Sorbermel
- Offers an alternative to mineral fibre products which tend to shed fibres

SPECIFICATIONS

Colour	Silver or white facing Grey (foam)
Available	Sheet size: 1.3 m x 1 m Available in 20, 25, 32, 50 and 75 mm thickness
	Custom sizes, thicknesses and facings available depending on MOQ



PRODUCT SPECIFICATIONS

Product	Total thickness	Construction Absorptive layer (mm) Mass barrier (kg) Decoupler (mm)	Sheet size ¹	Thermal conductivity ²	Operating temperature range
Sorberbarrier M20/4.5	20	M12/4.5/06	1.3 x 1.0 and 1.3 x 2.2	0.033 W/mK	-40 to 100 °C (Continuous) -40 to 120 °C (Intermittent)
Sorberbarrier M25/4.5	25	M12/4.5/12	1.3 x 1.0 and 1.3 x 2.2		
Sorberbarrier M32/4.5	32	M25/4.5/06	1.3 x 1.0 and 1.3 x 2.2		
Sorberbarrier M32/8.0	32	M25/8.0/06	1.3 x 1.0		
Sorberbarrier M50/4.5	50	M25/4.5/25	1.3 x 1.0 and 1.3 x 2.2		
Sorberbarrier M50/8.0	50	M25/8.0/25	1.3 x 1.0		
Sorberbarrier M75/4.5	75	M50/4.5/25	1.3 x 1.0		
Sorberbarrier M75/8.0	75	M50/8.0/25	1.3 x 1.0		

Tolerances: Weight: ± 0.5 Kg; thickness: ± 3 mm; length and width: -0 to +5 mm.

1 Useable width specified. Some surface coverings such as foils, films or fabric may overhang the useable width. Please consult your sales representative as minimum order quantities may apply.

2 Typical value for Polyurethane foam - Polyurethane handbook: Chemistry, Raw Materials, Processing, Application, Properties 2nd edition.

All above products are available with pressure-sensitive adhesive backing. Under extreme temperature and humidity conditions, air flow or where the substrate surfaces cannot be free from contaminants, mechanical fixing will be required. For all inverted installations including ceiling installations, mechanical fixing must be done in addition to pressure sensitive adhesive. Please consult your local Pyrotek representative for more information.

MATERIAL PROPERTIES

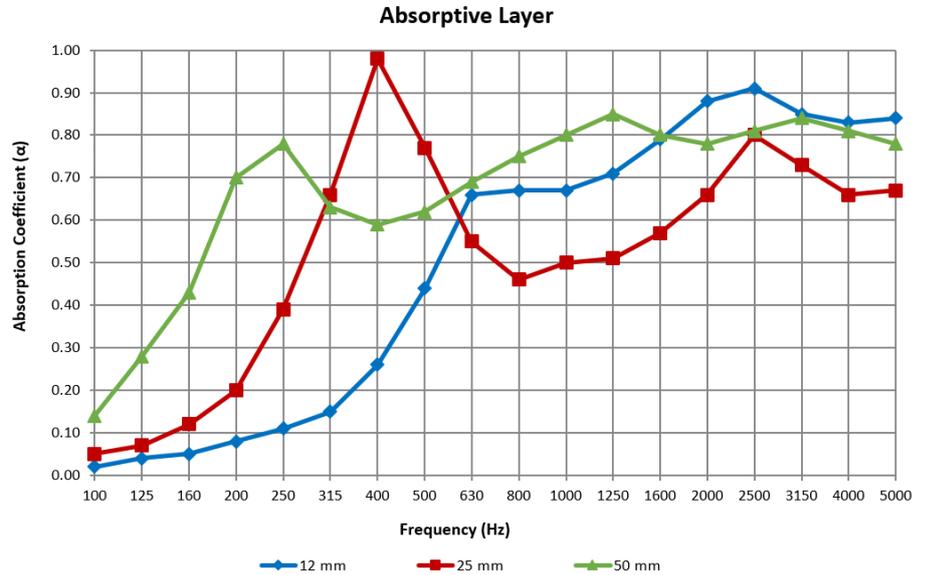
Test method	Property	Report	Results
UL94*	Flammability of plastic materials	13513JY7	HF-1
FMVSS-302*	Flammability of interior materials	11512-MK3	Complies to the requirements of US (DOT) Department of transportation for occupant compartments of motor vehicles

*Results for plain foam only.

ACOUSTIC PERFORMANCE

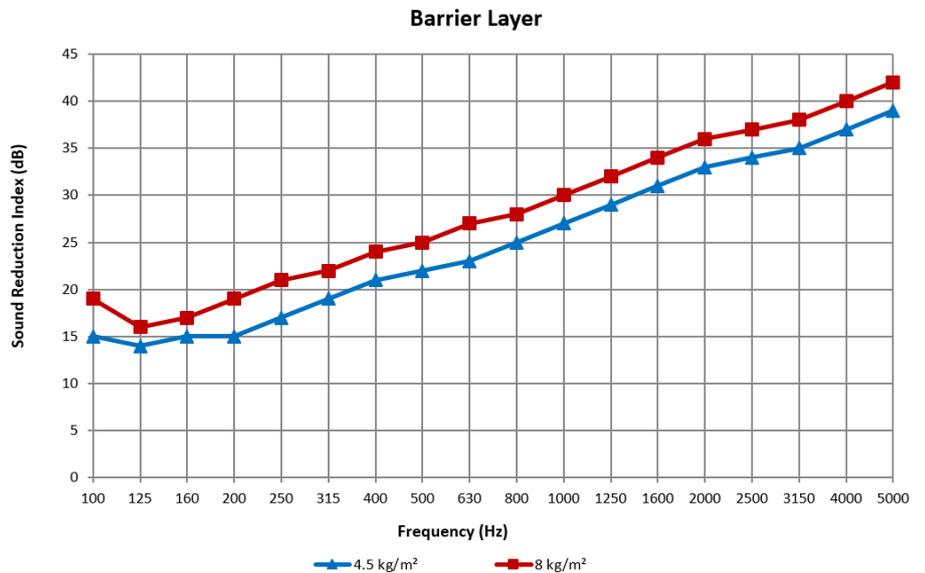
Frequency (Hz)	12 mm	25 mm	50 mm
100	0.02	0.05	0.14
125	0.04	0.07	0.28
160	0.05	0.12	0.43
200	0.08	0.20	0.70
250	0.11	0.39	0.78
315	0.15	0.66	0.63
400	0.26	0.98	0.59
500	0.44	0.77	0.62
630	0.66	0.55	0.69
800	0.67	0.46	0.75
1000	0.67	0.50	0.80
1250	0.71	0.51	0.85
1600	0.79	0.57	0.80
2000	0.88	0.66	0.78
2500	0.91	0.80	0.81
3150	0.85	0.73	0.84
4000	0.83	0.66	0.81
5000	0.84	0.67	0.78
NRC	0.55	0.60	0.75
SAA	0.53	0.59	0.73
α_w	0.40 (MH)	0.60	0.75

Tested to ISO 354:2003 at University of Canterbury, New Zealand
Report Number: 288, 289 & 290



Frequency (Hz)	4.5 kg/m ²	8 kg/m ²
100	15	19
125	14	16
160	15	17
200	15	19
250	17	21
315	19	22
400	21	24
500	22	25
630	23	27
800	25	28
1000	27	30
1250	29	32
1600	31	34
2000	33	36
2500	34	37
3150	35	38
4000	37	40
5000	39	42
Rw	26	30
STC	26	30

Tested to ASTM E90-09 at Riverbank Acoustical Laboratories, USA
Report Numbers: TL18-642 & TL18-643



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.
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