

# SORBERBARRIER

## high performance barrier-absorber composite

Sorberbarrier® is a unique composite noise control product that offers both excellent noise transmission loss and high noise absorption. It was developed to meet market requirements for reducing noise in industrial and domestic enclosure, OEM and marine markets.

Sorberbarrier combines the superior performance of the flexible mass barrier, Wavebar® together with the high absorption properties of Sorberfoam™. Wavebar is laminated to the Sorberfoam layer to alter the natural absorption curve enhancing sound absorption in mid to high frequencies.

Sorberfoam is applied by using a sophisticated process that optimises flow resistivity and maximises sound absorption. With a black finish and a more discreet look.

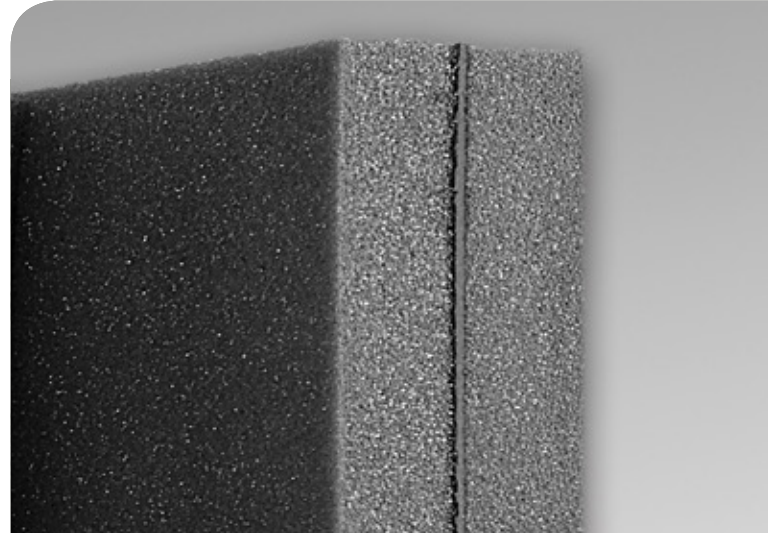
The high performance of Sorberbarrier is achieved by its unique construction. Placing the mass barrier between two layers of absorbing foam, keeps the barrier separate from the structure to which it is bonded, allowing it to remain flexible at all times. This increases the noise transmission loss.

Tests have revealed that altering the thickness of foam that separates the noise barrier from the structure, improves the product's performance in some frequencies without an increase in overall weight.

Sorberbarrier targets specific frequency ranges. The combination, makes it the most versatile product for controlling noise in the market place.

### SPECIFICATIONS

Colour	Black (other colours available on request – minimum quantities apply)
Available	Available in 50 mm, 75 mm thickness
	1.3 m x 1 m (or custom depending on MOQ)



## applications

- Engine rooms in boats under CE Marine Survey
- Acoustic and thermal insulation for air conditioning duct work
- Acoustic insulation for plenum areas
- Power generation units
- Machinery and equipment enclosures.
- Car, boat, truck and bus engine compartment, fire wall and bonnets

## features

- Multi-function product: an absorber and barrier in one
- No ozone-depleting substances generated during manufacture
- Free from formaldehyde, phenolic resins and irritating fibres
- Engineered to resist degradation (foam rot) more than traditional acoustic foam
- Low spread of flame surface
- Quick and easily installed in awkward places
- Easy to cut, adhere or mechanically fasten into position
- Matching self-adhesive tape or sprayable coating, for sealing joints and edges of foam
- Can be constructed with other absorption products: eg Sorbermel®



**PRODUCT SPECIFICATIONS**

Product name	Total thickness (mm)	Construction Absorptive layer(mm)/ Mass barrier (kg)/ decoupler (mm)	Sheet size** (m)	Operating temperature range (°C)
Sorberbarrier 20/4	20	12/4/06	1.3 x 1.0 and 1.3 x 2.2	-40 to 100 (Continuous)  -40 to 120 (Intermittent)
Sorberbarrier 25/4	25	12/4/12	1.3 x 1.0 and 1.3 x 2.2	
Sorberbarrier 32/4	32	25/4/06	1.3 x 1.0 and 1.3 x 2.2	
Sorberbarrier 32/8	32	25/8/06	1.3 x 1.0	
Sorberbarrier 50/4	50	25/4/25	1.3 x 1.0 and 1.3 x 2.2	
Sorberbarrier 50/8	50	25/8/25	1.3 x 1.0	
Sorberbarrier 75/4	75	50/4/25	1.3 x 1.0	
Sorberbarrier 75/8	75	50/8/25	1.3 x 1.0	

Tolerances: Weight: +/- 0.5Kg; Thickness: +/- 3mm ; Length and Width: -0 to +5mm

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

\*\*Useable width is specified. Some surface coverings such as foils, films or fabric may overhang the useable width.

**MATERIAL PROPERTIES**

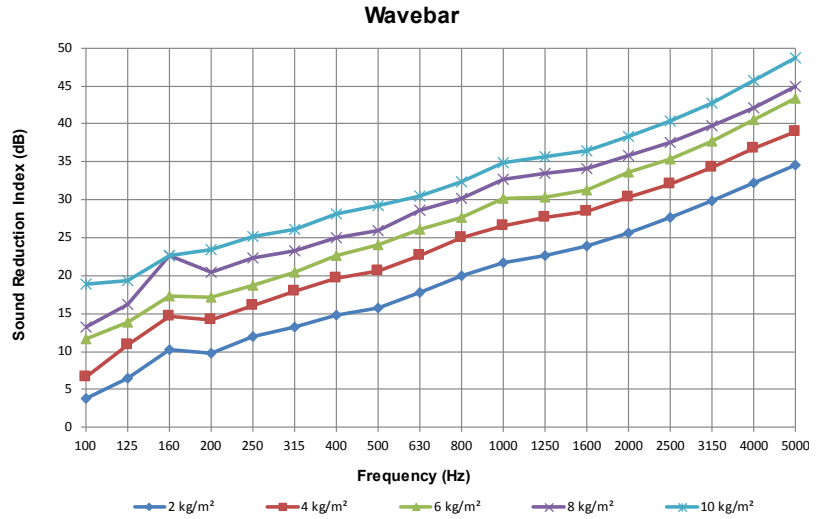
Test method	Index	Results	Description
UL94	After flame time ≤ 2 seconds	HBF*	Horizontal burn test for foam materials.
FMVSS-302	Burn rate - mm/min (LOI)	Self extinguishing	Automotive burn rate test.

\*Result applies to 12mm thickness.



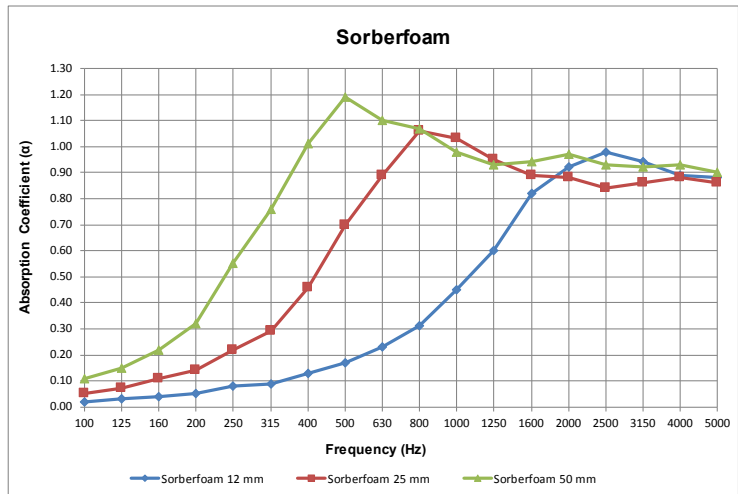
## ACOUSTIC PERFORMANCE

Frequency (Hz)	4 kg/m <sup>2</sup>	8 kg/m <sup>2</sup>
100	6.7	13.3
125	10.8	16.2
160	14.7	22.6
200	14.1	20.5
250	16.0	22.3
315	17.9	23.2
400	19.7	25.0
500	20.6	26.0
630	22.6	28.6
800	25.0	30.1
1000	26.6	32.7
1250	27.6	33.4
1600	28.5	34.1
2000	30.4	35.9
2500	32.1	37.6
3150	34.3	39.7
4000	36.7	42.1
5000	39.0	45.0
R <sub>w</sub>	25	31
STC	26	31



Tested to ISO 15186-1:2003 & 10140-4:2010 at University of Canterbury, New Zealand Report Number: 189

Frequency (Hz)	Sorberfoam 12 mm	Sorberfoam 25 mm	Sorberfoam 50 mm
100	0.02	0.05	0.11
125	0.03	0.07	0.15
160	0.04	0.11	0.22
200	0.05	0.14	0.32
250	0.08	0.22	0.55
315	0.09	0.29	0.76
400	0.13	0.46	1.01
500	0.17	0.70	1.19
630	0.23	0.89	1.10
800	0.31	1.06	1.07
1000	0.45	1.03	0.98
1250	0.60	0.95	0.93
1600	0.82	0.89	0.94
2000	0.92	0.88	0.97
2500	0.98	0.84	0.93
3150	0.94	0.86	0.92
4000	0.89	0.88	0.93
5000	0.88	0.86	0.90
NRC	0.40	0.70	0.90
SAA	0.40	0.70	0.90
a <sub>w</sub>	0.25 (H)	0.50 (MH)	0.85



Report Number: 282, 283 & 284 Report Number: 189

For further information and contact details, please visit our website [pyroteknc.com](http://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](http://pyroteknc.com/disclaimer).*

