

# SORBERBARRIER V

## perforated faced barrier - absorber composite

Sorberbarrier V is a unique composite noise control product that offers both excellent noise transmission loss and high noise absorption with a hard wearing perforated vinyl surface covering. It was developed to meet market requirements for reducing reflected reverberated noise in heavy equipment, automotive and marine industries, or where a cosmetic finish is required.

Sorberbarrier V combines the superior performance of the flexible mass barrier, Wavebar®, and with the high absorption properties of Sorberfoam. A perforated vinyl facing is laminated to the surface of Sorberfoam to alter the natural absorption curve enhancing sound absorption in mid to high frequencies.

The facing used on Sorberbarrier V is a functional and hard-wearing perforated vinyl. Strong and flexible, it has an attractive finish in either black, grey, beige, or sandpiper. Other colours are available on request. The perforation maximises critical speech frequency sound absorption. Sorberfoam V is engineered to resist degradation or foam rot.

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 V surface covering targets specific frequency ranges, which combined with a mass barrier, provides maximum noise reduction - making it the most versatile product for controlling noise in the market place.

### SPECIFICATIONS

Surface Colour	Black, grey, beige and sandpiper (others on request)
Other facings	M (Silver), PU (Black), AGC, GC
Standard	Available in 20, 25, 32, 50, 75 mm thickness
	1.3 m x 1 m (or custom depending on MOQ)



### applications

- Cabin lining for trucks, tractors, earth moving equipment
- Acoustic enclosures, control rooms and recording studios
- Power generation units, machinery and equipment enclosures

### 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
- Sorberfoam is engineered to resist degradation (foam rot) more than traditional acoustic foam
- The facing allows noise energy to penetrate the acoustic foam through the perforation
- Quick and easily installed in challenging places
- Easy to cut, adhere or mechanically fasten into position
- Available with self-adhesive backing for ease of installation
- Can be constructed with other absorption product Sorbermel®
- Surface colour – Standard colours black, grey, beige, or sandpiper available. Other colours available on request. Consult with your local Pyrotek representative for details



**PRODUCT SPECIFICATIONS**

Product name	Total thickness (mm)	Construction Absorptive layer(mm)/ Mass barrier (kg)/ decoupler (mm)	Sheet size** (m)	Operating temperature range (°C)	Thermal conductivity (K)
Sorberbarrier V20/4.5	20	V12/4.5/06	1.3 x 1.0 and 1.3 x 2.2	-40 to 100 (Continuous)  -40 to 120 (Intermittent)	0.033 W/mK*
Sorberbarrier V25/4.5	25	V12/4.5/12	1.3 x 1.0 and 1.3 x 2.2		
Sorberbarrier V32/4.5	32	V25/4.5/06	1.3 x 1.0 and 1.3 x 2.2		
Sorberbarrier V32/8.0		V25/8.0/06	1.3 x 1.0		
Sorberbarrier V50/4.5	50	V25/4.5/25	1.3 x 1.0 and 1.3 x 2.2		
Sorberbarrier V50/8.0		V25/8.0/25	1.3 x 1.0		
Sorberbarrier V75/4.5	75	V50/4.5/25	1.3 x 1.0		
Sorberbarrier V75/8.0		V50/8.0/25	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.

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

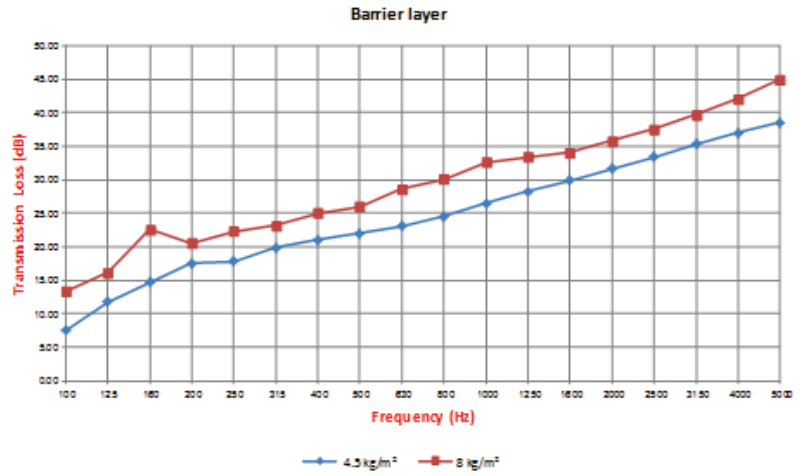
**MATERIAL PROPERTIES**

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

\*Result applies to 12mm thickness.

## ACOUSTIC PERFORMANCE

Frequency (Hz)	*4.5 kg/m <sup>2</sup>	**8 kg/m <sup>2</sup>
100	7.50	13.30
125	11.76	16.19
160	14.66	22.55
200	17.50	20.51
250	17.80	22.29
315	19.80	23.16
400	21.00	25.00
500	22.00	25.99
630	23.10	28.58
800	24.50	30.09
1000	26.50	32.66
1250	28.20	33.43
1600	29.90	34.09
2000	31.60	35.86
2500	33.40	37.56
3150	35.30	39.74
4000	37.00	42.06
5000	38.60	45.00
STC	27	31
R <sub>w</sub>	27	31

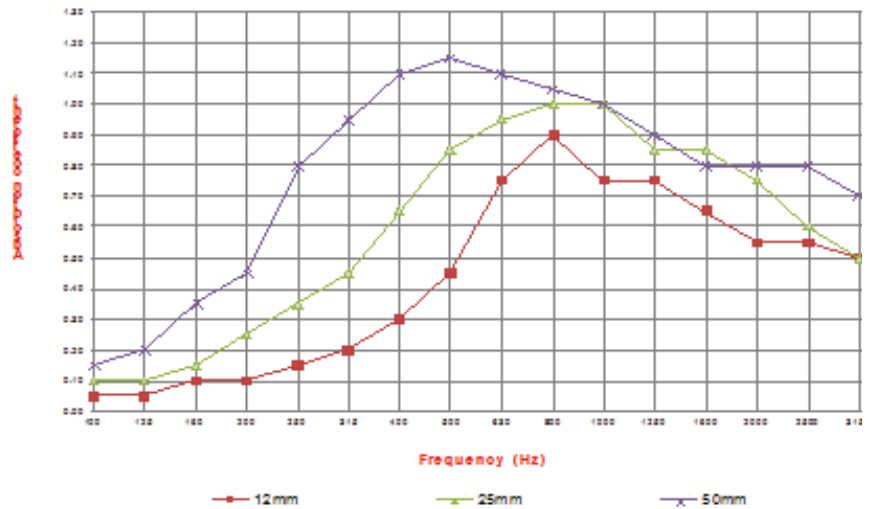


\*Results for 4.5kg m2 are tested to AS1191 Transmission loss report ATF-173 (revision 1)

\*\*Results shown for 8kg m<sup>2</sup> are tested to ISO15186-1/ISO 10140-4 (Report No. 189 Issue: 1)

Frequency (Hz)	12 mm	25 mm	50 mm
100	0.05	0.10	0.15
125	0.05	0.10	0.20
160	0.10	0.15	0.35
200	0.10	0.25	0.45
250	0.15	0.35	0.80
315	0.20	0.45	0.95
400	0.30	0.65	1.10
500	0.45	0.85	1.15
630	0.75	0.95	1.10
800	0.90	1.00	1.05
1000	0.75	1.00	1.00
1250	0.75	0.85	0.90
1600	0.65	0.85	0.80
2000	0.55	0.75	0.80
2500	0.55	0.60	0.80
3150	0.50	0.50	0.70
4000	0.40	0.45	0.60
5000	0.35	0.45	0.55
NRC	0.50	0.70	0.85

## ABSORPTION LAYER



AS ISO 354 RMIT

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).

