SORBERBARRIER GC

barrier-absorber composite with woven glass cloth facing

Sorberbarrier GC is a soundproofing, barrier-absorber composite product. It offers both excellent noise transmission loss and sound absorption performance.

The unique construction of the decoupling layer comprises of a highly flexible noise barrier (Wavebar®), laminated between two layers of acoustic foam (Sorberfoam). A durable, flame retardant woven glass cloth (GC) facing is laminated to the outer foam layer, granting additional protection to the product.

The decoupling layer isolates the mass barrier layer from the structure to which it is bonded. This allows the decoupled mass barrier to remain flexible, significantly enhancing its transmission loss performance.

Independent tests reveal that altering the thickness of the decoupling foam improves the product's performance at certain frequencies without drastically increasing the overall weight of the product.

Sorberfoam is a combustion modified, polyurethane foam. It is specially developed to provide high sound absorption performance across a broad frequency range. It is also engineered to resist degradation or foam rot.

Sorberbarrier GC is easy to install without the need for specialist tools or equipment.

applications

- Sorberbarrier offers an alternative to mineral fibre products, which tend to shed
- Power generation units and containerised generator sets
- Additional thermal and acoustic insulation for air-conditioning
- Engine compartments and firewalls of cars, boats, trucks, buses and construction machinery
- Machinery and equipment enclosures
- Whitegoods industry
- General enclosures

features

- 2-in-1 soundproofing solution: absorber and noise barrier
- 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
- Easy to cut, adhere or mechanically fasten into position
- Available with self-adhesive backing for ease of installation
- Offered in a variety of thicknesses and material compositions.
- Can be constructed with other absorption products such as Sorberpoly and Sorbermel
- Quick and easy to install

SPECIFICATIONS

Colour	Black (GC facing), Grey (Foam)
	Other facing colours available depending on MOQ (White and Grey)
Available	Thickness: 20, 25, 32, 50, 75 mm
	or custom depending on MOQ

PRODUCT SPECIFICATIONS

Product	Total thickness (mm)	Construction Absorptive layer (mm)/Mass barrier (kg)/ decoupler (mm)	Sheet size** (m)	Operating temperature range (°C)	Thermal conductivity (K)
Sorberbarrier GC20/4.5	20	GC12/4.5/06	1.3 x 1.0 1.3 x 2.2	-40 °C to100 °C (Continuous) -40 °C to 120 °C (Intermittent)	0.033 W/mK*
Sorberbarrier GC25/4.5	25	GC12/4.5/12	1.3 x 1.0 1.3 x 2.2		
Sorberbarrier GC32/4.5	32	GC25/4.5/06	1.3 x 1.0 1.3 x 2.2		
Sorberbarrier GC32/8.0	32	GC25/8.0/06	1.3 x 1.0		
Sorberbarrier GC50/4.5	50	GC25/4.5/25	1.3 x 1.0 1.3 x 2.2		
Sorberbarrier GC50/8.0	50	GC25/8.0/25	1.3 x 1.0		
Sorberbarrier GC75/4.5	75	GC50/4.5/25	1.3 x 1.0		
Sorberbarrier GC75/8.0	75	GC50/8.0/25	1.3 x 1.0		

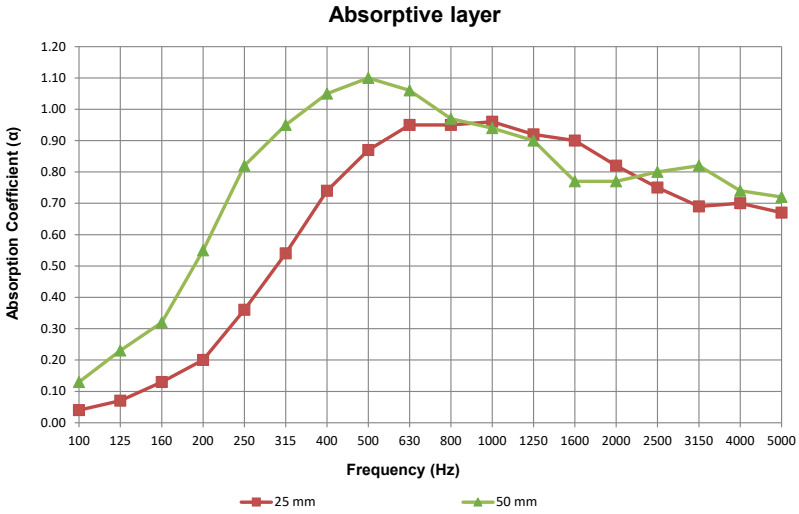
Tolerances: Length: ±1%, Width: -0/+5 mm, Thickness: ±3 mm, Weight: ±10%
**Typical value for Polyurethane foam - Polyurethane handbook: Chemistry, Raw Materials, Processing, Application, Properties 2nd edition*
***Useable width is specified. Some surface coverings such as foils, films or fabric may overhang the useable width.*
All above products are available with pressure-sensitive adhesive backing. Under extreme temperature 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 No.	Results
BS EN ISO 4589.2: 1999	Determination of the burning behaviour of plastics by oxygen index at ambient temperature	390596	Directive 94/25/EC compliant facing, Sorbertextile GC, which is suitable for use as insulation of engine space in recreational maritime craft.
BS EN ISO 4589.3: 1996	Determination of the burning behaviour of plastics by oxygen index at an elevated temperature of 60 °C	390595	
EN ISO 9094-1, 9094-2	Classification / Compliance	390596(A)	

ACOUSTIC PERFORMANCE

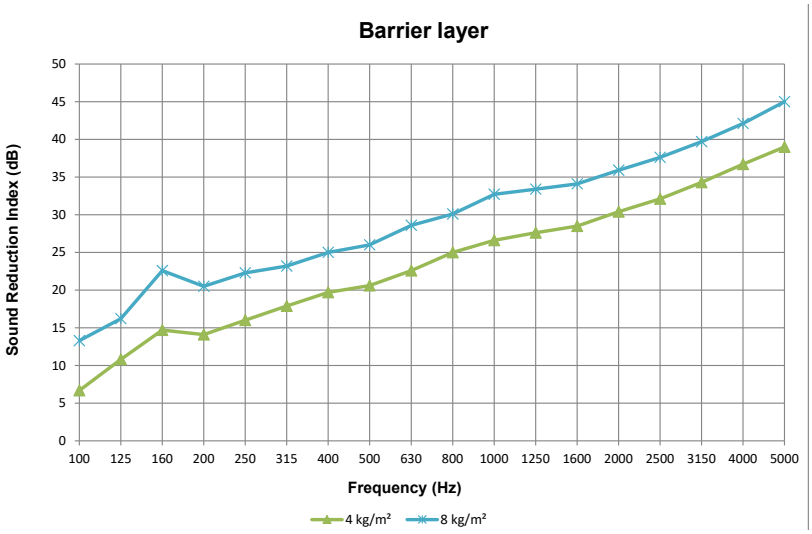
Frequency (Hz)	25 mm	50 mm
100	0.04	0.13
125	0.07	0.23
160	0.13	0.32
200	0.20	0.55
250	0.36	0.82
315	0.54	0.95
400	0.74	1.05
500	0.87	1.10
630	0.95	1.06
800	0.95	0.97
1000	0.96	0.94
1250	0.92	0.90
1600	0.90	0.77
2000	0.82	0.77
2500	0.75	0.80
3150	0.69	0.82
4000	0.70	0.74
5000	0.67	0.72
NRC	0.75	0.90
SAA	0.75	0.89
α_w	0.65 (M)	0.85



Tested to ISO 354:2003 at University of Canterbury, New Zealand

Report Number: 286 & 287

Frequency (Hz)	4 kg/m²	8 kg/m²
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
Rw	25	31
STC	26	31



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

Report Number: 262a & 264a

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