SORBERBARRIER AGC

barrier - absorber composite with aluminium foil glass cloth facing

Sorberbarrier AGC is a barrier-absorber composite noise control product that offers both excellent noise transmission loss and high sound absorption. It was specially developed to provide complete noise control solutions within one high performance, versatile product.

Its unique construction comprises a high mass, flexible noise barrier, Wavebar®, laminated between two layers of flexible acoustic foam, Sorberfoam, consisting of a sound absorption layer and a decoupling layer. A durable, flame retardant, aluminium foil glass cloth facing - AGC, is laminated to the outer absorptive foam layer.

Sorberfoam is Pyrotek's specially developed combustion modified, polyurethane foam offering high sound absorption across a broad frequency range and engineered to resist degradation or foam rot.

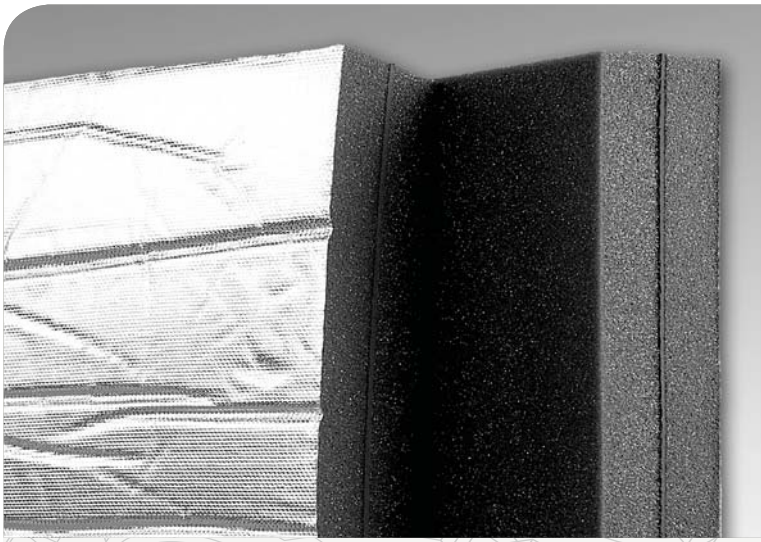
The faced foam layer absorbs airborne sound and reduces the effect of reverberant sound build-up within an enclosed space. Its AGC facing alters the natural absorption curve enhancing its sound absorption in mid to low frequencies besides providing additional protection to the foam from mechanical stress and dirt, oil and liquid ingress. Being flame retardant, it further enhances the fire and thermal insulation performance of the foam.

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 at all times, significantly enhancing its transmission loss performance. Tests have revealed that altering the thickness of the decoupling foam improves the product's performance at some frequencies without an increase in its overall weight.

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

SPECIFICATIONS

Colour	Black (other colours available on request – minimum quantities apply)
Other facings	M (Silver), PU (Black), V (Grey), AGC, GC
Standard	Available in 20, 25, 32, 50, 75 mm thickness
	1.3 m x 1 m or custom depending on MOQ



applications

- Sorberbarrier offers an alternative to mineral fibre products, which tend to shed
- Engine rooms in boats under CE Marine Survey
- 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

- 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
- Low spread of flame surface
- The AGC facing outperforms comparative products at lower frequencies
- Long service life
- Quick and easily installed in awkward places
- Easy to cut, adhere or mechanically fasten into position
- Available with self-adhesive backing for ease of installation
- Offered in varying thicknesses and material compositions.
- Can be constructed with other absorption products such as Sorberpoly and Sorbermel

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 AGC20/4.5	20	AGC12/4.5/06	1.3 x 1.0 and 1.3 x 2.2	-40 to100 (Continuous) -40 to 120 (Intermittent)	0.033W/mK*
Sorberbarrier AGC25/4.5	25	AGC12/4.5/12	1.3 x 1.0 and 1.3 x 2.2		
Sorberbarrier AGC32/4.5	32	AGC25/4.5/06	1.3 x 1.0 and 1.3 x 2.2		
Sorberbarrier AGC32/8.0	32	AGC25/8.0/06	1.3 x 1.0		
Sorberbarrier AGC50/4.5	50	AGC25/4.5/25	1.3 x 1.0 and 1.3 x 2.2		
Sorberbarrier AGC50/8.0	50	AGC25/8.0/25	1.3 x 1.0		
Sorberbarrier AGC75/4.5	75	AGC50/4.5/25	1.3 x 1.0		
Sorberbarrier AGC75/8.0	75	AGC50/8.0/25	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.

SELF-ADHESIVE TAPES SPECIFICATIONS

CODE	DESCRIPTION	OPERATING SERVICE TEMPERATURE °C
Alpha – A	Premium high performance transfer tape suitable for most applications.	-10 to 110
Alpha - A1	Versatile, resilient, high tack adhesive with excellent bonding strength to a wide range of substrates.	-10 to 80
Alpha - A2	Scrim reinforced acrylic backing for extra strength and high durability.	-10 to 60

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. When ordering products with adhesive backing, please specify your choice of tape with the appropriate code A, A1 or A2 as Sorberbarrier AGC32A/4.5, Sorberbarrier AGC32A1/4.5 or Sorberbarrier AGC32A2/4.5. Unless otherwise stated, the standard adhesive backing supplied is premium grade (Alpha - A).

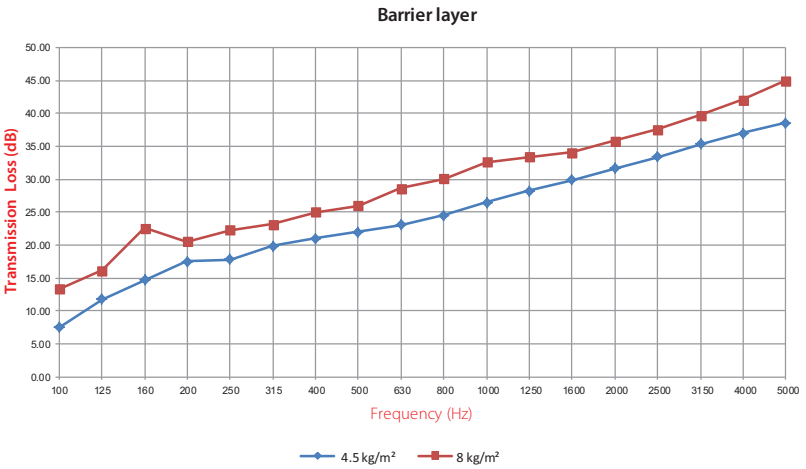
MATERIAL PROPERTIES

Test method	Property	Report No.	Results
BS EN ISO 4589.2: 1991	Limiting ambient oxygen index (LOI)	360498	23.30%
BS EN ISO 4589.3: 1996	Limiting elevated oxygen index (LOI)	360499	23.20%
DIN 5510-2:2009-05	Classification / Compliance	P60-15-0598en	Complies to Directive 94/25/EC. Material suitable for use an insulation of engine space in recreational maritime craft.
EN ISO 9094-1: 2003		360499 (A)	
DIN 5510-2 Annex C	Toxicity (FED)	P60-15-3390en	Pass Toxicity (FED) requirements ≤ 1
ASTM E 162	Surface flammability	101869004MID-001	Complies for US (FRA) Federal railroad administration requirements and requirements of NFPA 130 and Complies for US (DOT) Department of transportation for acoustic insulation of transit bus and vans (Docket 90 A)
ASTM E 662	Optical Density of Smoke Generated	102057878MID-004	
ASTM E 800 (SMP-800C)	Gases present or Generated during Fires	101869004MID-003	
UL94*	Flammability of plastic materials	13513JY7	HF-1
FMVSS-302*	Flammability of interior materials	14713JY1	Complies to the requirements of US (DOT) Department of transportation for occupant compartments of motor vehicles

Results for plain foam only

ACOUSTIC PERFORMANCE

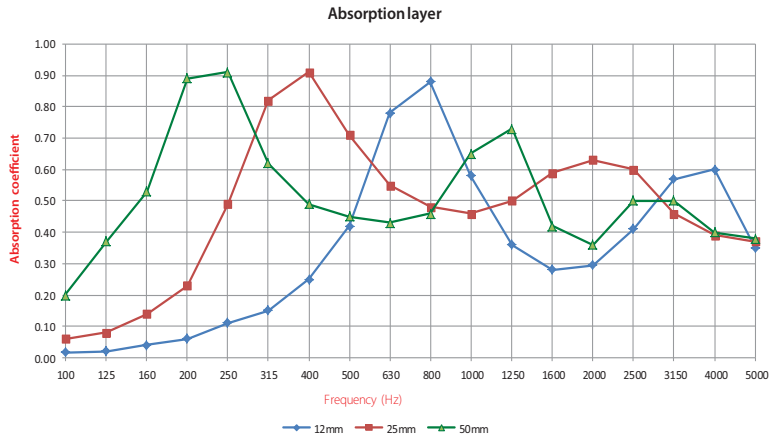
Frequency (Hz)	4.5 kg/m²	8 kg/m²
100	7.50	13.30
125	11.76	16.19
160	14.66	22.55
200	17.50	20.51
250	17.80	22.29
315	19.80	23.16
400	21.00	25.00
500	22.00	25.99
630	23.10	28.58
800	24.50	30.09
1000	26.50	32.66
1250	28.20	33.43
1600	29.90	34.09
2000	31.60	35.86
2500	33.40	37.56
3150	35.30	39.74
4000	37.00	42.06
5000	38.60	45.00
STC	27	31
R_w	27	31



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

**Results shown for 8kg m² are tested to ISO15186-1/ISO 10140-4 (Report No. 189 Issue: 1)

Frequency (Hz)	12 mm	25 mm	50 mm
100	0.02	0.06	0.20
125	0.02	0.08	0.37
160	0.04	0.14	0.53
200	0.06	0.23	0.89
250	0.11	0.49	0.91
315	0.15	0.82	0.62
400	0.25	0.91	0.49
500	0.42	0.71	0.45
630	0.78	0.55	0.43
800	0.88	0.48	0.46
1000	0.58	0.46	0.65
1250	0.36	0.50	0.73
1600	0.28	0.59	0.42
2000	0.29	0.63	0.36
2500	0.41	0.60	0.50
3150	0.57	0.46	0.50
4000	0.60	0.39	0.40
5000	0.35	0.37	0.38
NRC	0.35	0.55	0.60



(Tested ISO 354-2003 at Canterbury University , New Zealand—Report Numbers 278,279,280)

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