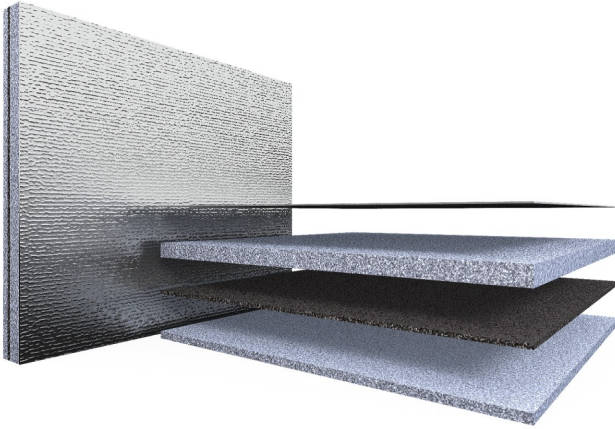




Reinforced Foil Faced Barrier - Absorber Composite



Sorberbarrier® ALR is a unique composite noise control product that offers both excellent noise transmission loss and high noise absorption with a durable flame resistant surface covering. It was developed to meet market noise reduction requirements in the industrial, OEM, marine and automotive markets.

Sorberbarrier ALR combines the superior performance of the flexible mass barrier, **Wavebar®** together with the high absorption properties of **Sorberfoam™**. An aluminium-reinforced facing is laminated to the surface of **Sorberfoam** to alter the natural absorption curve to absorb low frequency noise.

The robust and tear-resistant surface provides good mechanical protection, whilst the aluminium foil provides excellent vapour barrier for flame, dust and oil resistance. 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 ALR's 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.

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 ALR facing outperforms comparative products at lower frequencies
- Quick and easily installed in awkward places
- Easy to cut, adhere or mechanically fasten into position
- Choice of three high performance self adhesive tapes for easy installation (see page 2)
- Can be constructed with other absorption products such as **Sorberpoly™** and **Sorbermel®**

APPLICATIONS

- **Sorberbarrier** offers an alternative to mineral fibre products, which tend to shed fibres
- 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
- Pool and spa motor enclosures
- Whitegoods industry
- General enclosures

PRODUCT SPECIFICATIONS

| PRODUCT NAME | TOTAL THICKNESS (mm) | CONSTRUCTION Absorptive layer(mm)/Mass barrier(Kg)/Decoupler(mm) | SHEET SIZE ** (metres) | OPERATING TEMPERATURE RANGE (°C) | THERMAL CONDUCTIVITY (K) |
|-------------------------|----------------------|--|-------------------------|---|--------------------------|
| Sorberbarrier ALR20/4.5 | 20 | ALR12/4.5/06 | 1.3 x 1.0 and 1.3 x 2.2 | -40 to100 (Continuous) -40 to 120 (Intermittent) | 0.033W/mK* |
| Sorberbarrier ALR25/4.5 | 25 | ALR12/4.5/12 | 1.3 x 1.0 and 1.3 x 2.2 | | |
| Sorberbarrier ALR32/4.5 | 32 | ALR25/4.5/06 | 1.3 x 1.0 and 1.3 x 2.2 | | |
| Sorberbarrier ALR32/8.0 | | ALR25/8.0/06 | 1.3 x 1.0 | | |
| Sorberbarrier ALR50/4.5 | 50 | ALR25/4.5/25 | 1.3 x 1.0 and 1.3 x 2.2 | | |
| Sorberbarrier ALR50/8.0 | | ALR25/8.0/25 | 1.3 x 1.0 | | |
| Sorberbarrier ALR75/4.5 | 75 | ALR50/4.5/25 | 1.3 x 1.0 | | |
| Sorberbarrier ALR75/8.0 | | ALR50/8.0/25 | 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

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 ALR32**A**/4.5, Sorberbarrier ALR32**A1**/4.5 or Sorberbarrier ALR32**A2**/4.5. Unless otherwise stated, the standard adhesive backing supplied is premium grade (Alpha - **A**).

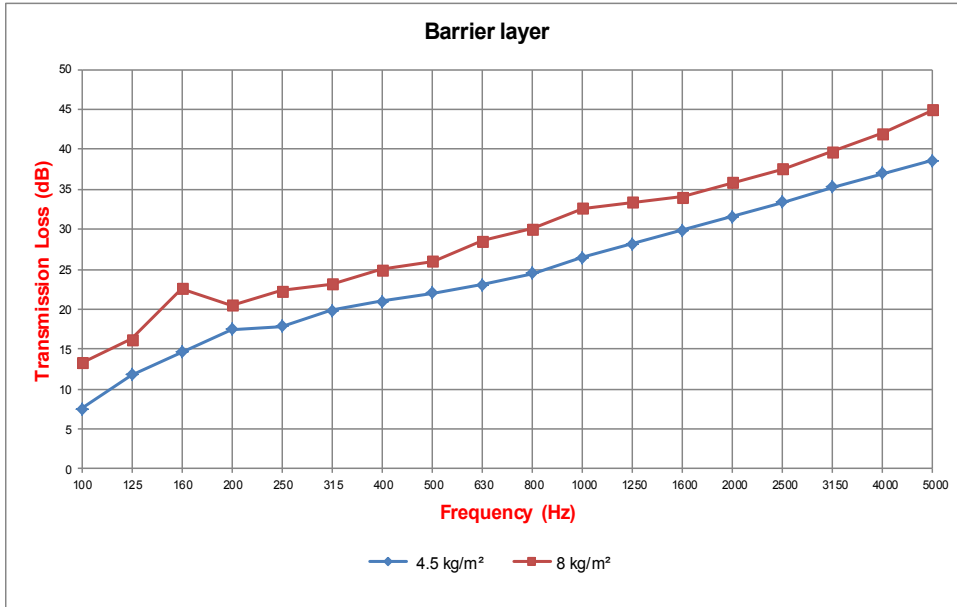
(For details on properties of the classified self adhesive tapes and installation of PSA backed products, refer document 'PSA Tapes - 525IP' on our website www.pyroteknc.com)

FLAMMABILITY PROPERTIES

| TEST METHOD | INDEX | RESULTS | DESCRIPTION |
|---|--|--------------------|--|
| AS 1530.3 1999 (Report No. 7-564774-CV) | Ignitability Spread of Flame Heat evolved Smoke Developed | 0 0 0 1 | Method for fire tests on building materials, components and structures. Complies |
| ISO 4589.2 - 1996 (Report No. 7-547912-CV) | Limiting Ambient Oxygen Index (LOI) | 24.9% * | Oxygen Index in accordance with ISO-4589-2 plastics determination of burning behaviour by oxygen index-part 2 ambient temperature. |
| BS EN ISO 4589.3 - 1996 (Report No. 192822) | Limiting Elevated Oxygen Index (LOI) | 21.5% | Oxygen Index in accordance with ISO-4589-3 plastics determination of burning behaviour by oxygen index-part 3 elevated temperature @ 60°C. |
| EN ISO 9094-1:2003 (Report No. 192822) Summary Report | Classification/Compliance | Complies | Complies to Directive 94/25/EC and EN ISO 9094-1:2003 |
| FMVSS-302 | Burn Rate - mm/min | Self Extinguishing | Automotive burn rate test. Complies |

* Results for Sorberfoam ALR

ACOUSTIC PERFORMANCE

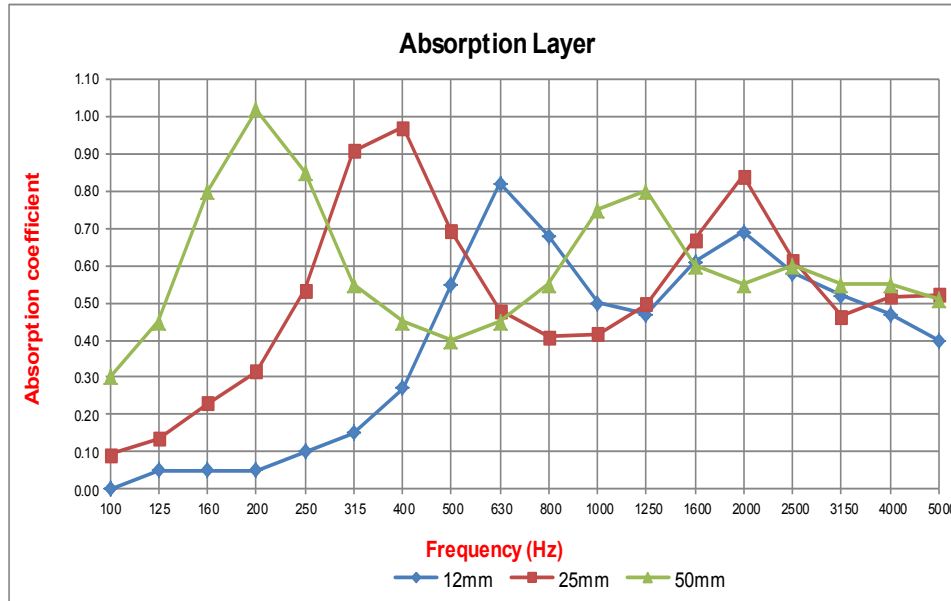


*Results for 4.5kg m² are tested to AS1191 Transmission loss report ATF-173 (revision 1)

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

| Frequency (Hz) | 4.5 kg/m ² | 8 kg/m ² |
|----------------|-----------------------|---------------------|
| 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 |
| Rw | 27 | 31 |

RMIT AS ISO 354



| Frequency (Hz) | 12 mm | 25 mm | 50 mm |
|----------------|-------------|-------------|-------------|
| 100 | 0.00 | 0.09 | 0.30 |
| 125 | 0.05 | 0.14 | 0.45 |
| 160 | 0.05 | 0.23 | 0.80 |
| 200 | 0.05 | 0.32 | 1.02 |
| 250 | 0.10 | 0.54 | 0.85 |
| 315 | 0.15 | 0.91 | 0.55 |
| 400 | 0.27 | 0.97 | 0.45 |
| 500 | 0.55 | 0.69 | 0.40 |
| 630 | 0.82 | 0.48 | 0.45 |
| 800 | 0.68 | 0.41 | 0.55 |
| 1000 | 0.50 | 0.42 | 0.75 |
| 1250 | 0.47 | 0.50 | 0.80 |
| 1600 | 0.61 | 0.67 | 0.60 |
| 2000 | 0.69 | 0.84 | 0.55 |
| 2500 | 0.58 | 0.61 | 0.60 |
| 3150 | 0.52 | 0.47 | 0.55 |
| 4000 | 0.47 | 0.52 | 0.55 |
| 5000 | 0.40 | 0.52 | 0.51 |
| NRC | 0.50 | 0.60 | 0.65 |

Caveats: Specifications are subject to change without notice. The data in this document are 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 or mechanical engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek NC 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 www.pyroteknc.com/disclaimer.

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