

TECHNICAL DATA SHEET

FOAM LAMINATES

PRODUCT DESCRIPTION

CMS Danskin Acoustics Foam Laminates are a flexible material available in a range of formats to suit. Consisting of a four part laminate, incorporating two spacer or isolating layers, a heavy mass absorptive layer and an outer flame / vapour barrier meeting Class '0' fire performance. Being of a laminated construction it overcomes the need for a separate isolation layer

BENEFITS

- Easy and quick to apply
- Excellent acoustic performance
- Applied as a single layer treatment
- Excellent temperature stability
- Available in various formats to suit application
- Low thermal conductivity
- Low toxicity

APPLICATIONS

CMS Danskin Acoustics Foam Laminates are a highly efficient acoustic treatment for ductwork, suspended ceilings, infills for partitions and baffles between offices, enclosures and similar outer treatment applications where a considerable reduction in the passage of breakout noise is required. Particularly suitable for pharmaceutical and clean room applications e.g. food & drink processing and electronics industries.

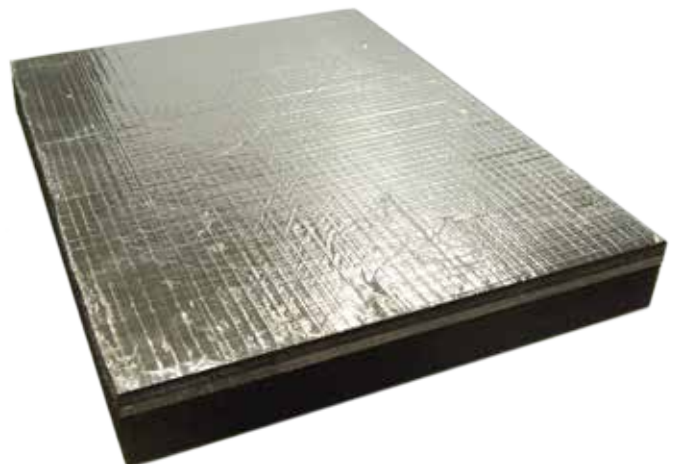
PHYSICAL INFORMATION

Dimensions

Standard sheet size: 1.2m x 1m

Other sizes are available upon request.

Composite overall thickness depends on format required.



Grades

Available in two basic designs depending on the type of mass barrier employed:

FL-B uses a polymeric heavy mass barrier material of either 5kg/m² (WB5) or 10 kg/m² (WB10) surface weights.

FL-L uses an acoustic grade lead sheet mass barrier of either 5kg/m² (L5) or 10 kg/m² (L10) surface weights.

Formats

CMS Danskin Acoustics Foam Laminates type FL-B and FL-L, are available with standard facing and backings applied to standard acoustic foam thicknesses:

SA self adhesive backing

CO Class '0' foil facing

P6 Acoustic foam 6mm thick

P12 Acoustic foam 12mm thick

P25 Acoustic foam 25mm thick

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ACOUSTIC PERFORMANCE

Foam Laminates are a high performance material that has been acoustically tested at certified independent test laboratories.

Tested and Rated according to:

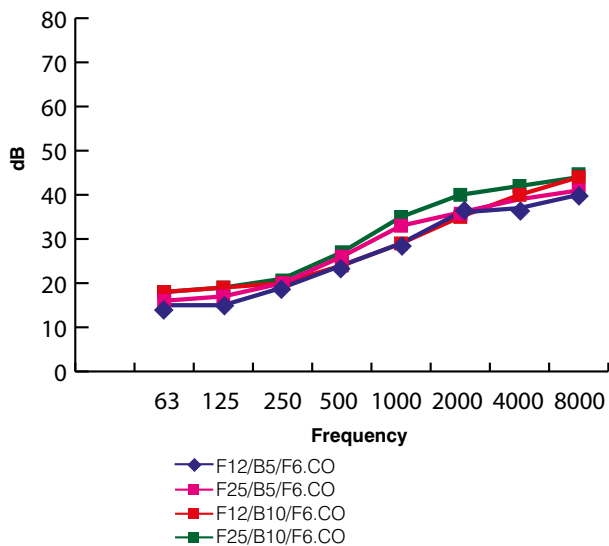
BS EN ISO 717-1

BS EN ISO 10140-2

FL-B is a composite of two layers of Polyurethane acoustic foam, with an inner isolated layer of heavy mass barium sulphate loaded polymeric barrier.

Sound Reduction Index

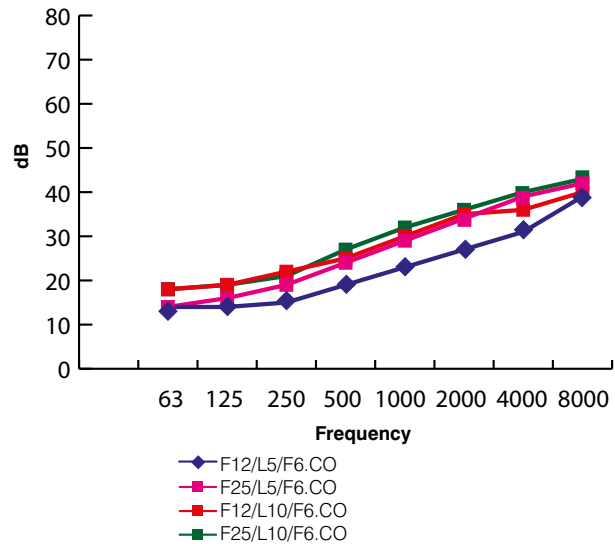
Format \ Hz	63	125	250	500	1k	2k	4k	8k
F12/B5/F6.CO	15	15	19	24	29	36	37	40
F25/B5/F6.CO	16	17	20	26	33	36	39	41
F12/B10/F6.CO	18	19	20	24	29	35	40	44
F25/B10/F6.CO	18	19	21	27	35	40	42	44



FL-L is a composite of two layers of Polyurethane acoustic foam, with an inner isolated layer of heavy mass acoustic grade lead sheet barrier.

Sound Reduction Index

Format \ Hz	63	125	250	500	1k	2k	4k	8k
F12/B5/F6	14	14	15	19	23	27	31	39
F25/B5/F6.CO	14	16	19	24	29	34	39	42
F12/B10/F6.CO	18	19	22	25	30	35	36	40
F25/B10/F6.CO	18	19	21	27	32	36	40	43



Acoustic duct lagging is a complex subject with the size, shape, thickness and configuration of the ductwork all having a significant effect on the system performance. The data shown above is based on flat panel tests used for foam laminate products.

Similar tests carried out on ducting will generally produce similar or slightly lower levels of performance.

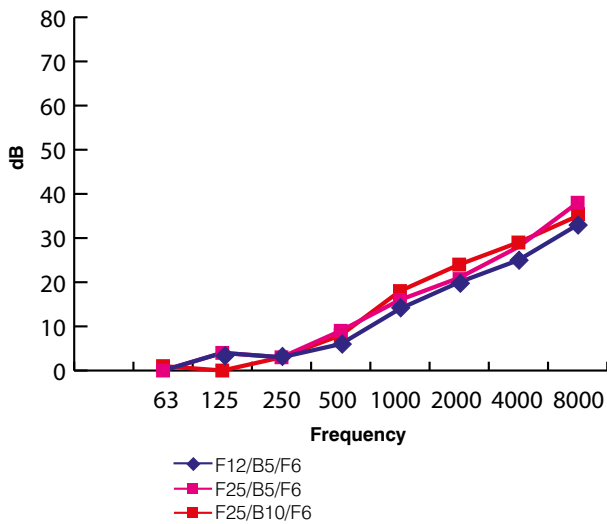
SELECTION GUIDELINES

CMS Danskin Acoustics have recognised the complex problems associated with noise breakout from ductwork and have developed performance data from laboratory test results. This performance data predicts, as closely as possible, the minimum likely improvement achievable by lagging a duct with foam laminate insulating materials.

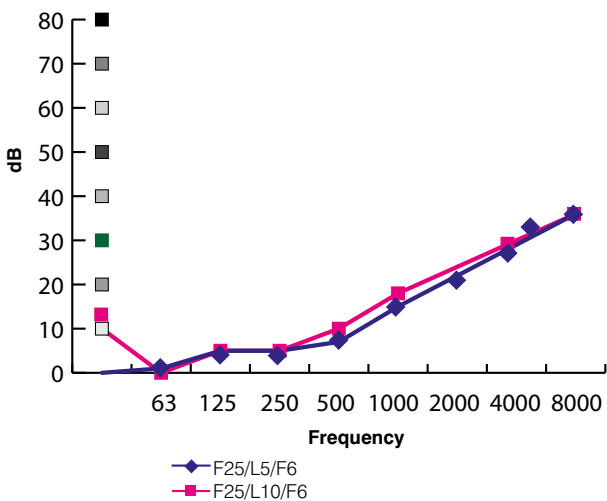
The data below is based on 1mm thick ductwork of 3.5m length and 200mm diameter cross section, and indicates the actual improvement of the foam laminate, with the noise reduction of the original untreated ductwork being removed from this performance data.

Sound Reduction Index

Format \ Hz	63	125	250	500	1k	2k	4k	8k
F12/B5/F6	0	4	3	6	14	20	25	33
F25/B5/F6	0	4	3	9	16	21	28	38
F25/B10/F6	1	0	3	8	18	24	29	35



Format \ Hz	63	125	250	500	1k	2k	4k	8k
F25/L5/F6	1	5	5	7	15	22	29	36
F25/L10/F6	0	5	5	10	18	24	30	36



To boost the performance and reduce low frequency noise breakout, CMS Danskin Acoustics damping sheet should be applied to the ductwork before installing the foam laminate.

INSTALLATION GUIDELINES

The method required in the fitting of foam laminate insulation is dependent on several factors.

- 1) The size and circumference of the duct.
- 2) The shape of the duct -rectangular or round.
- 3) The ambient temperature and temperature within the duct normal and maximum.
- 4) The location of the duct inside or outside

Circular ductwork

Round ducts where one sheet of foam laminate will completely lap the circumference can be insulated without the need for adhesives or extra mechanical fixings. Mating edges are sealed with a foil faced adhesive tape to match the finish required.

The foam laminate insulation can be secured to large round ducts using proprietary banding systems, in conjunction with the edge tape.

Rectangular ductwork

Rectangular ducts normally require additional support for the foam laminate in the form of contact adhesive and/or proprietary insulation fixings, particularly on the underside where the foam laminate will tend to hang away from the duct surface.

It is recommended that large intricate ducts be further supported and reinforced with 25mm wire mesh (i.e. chicken wire) and wire ties.

Banding rectangular ductwork is not recommended as insufficient support is given across the sides of the duct and the foam laminate will be compressed at the corners, thus affecting performance.

INSTALLATION ACCESSORIES

CMS Danskin Acoustics recommends the following products to assist installation:

Aerosol Adhesive

SPRAYTACK is a specially formulated nonflammable synthetic rubber adhesive. Available in 500ml aerosol cans, which provides approximately 5m² coverage. SPRAYTACK is a contact adhesive that requires application to both surfaces before bonding.

STA-PUT is a simple, strong adhesive spray for bonding materials to concrete, brick, wood, plaster or metal walls and ceilings. Available in 500ml aerosol cans, which provide approximately 3.4m² coverage. Offers immediate bond strength.

Pins and Washers

CMS Danskin Acoustics pins and washers are available in two designs.

- 1) With a self adhesive base.
 - 2) With a perforated base for use with a separate adhesive.
- Both types consist of a pointed spike attached to a square steel base. The product is held in place by a self-locking washer, which is slid over the spike after the material is installed.

INSTALLATION SERVICE

In addition to supply of this product CMS Danskin Acoustics can provide a listing of competitively-priced approved installers that service anywhere in the UK. Use of this service ensures that installation is performed to the highest standards by tradesmen fully experienced in the specialist skills of fitting CMS Danskin Acoustics materials correctly.

For further details contact your local CMS Danskin Acoustics.

CMS DANSKIN ACOUSTICS

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IMPORTANT: Directions for use are given for guidance only and are not intended to form part of any contract. They should be varied or adapted to suit your particular materials or conditions of use. Goods supplied by the company are made to approved standards from the highest quality raw materials but no warranty or guarantee is given as to their suitability for any particular purpose or application, and no liability is accepted for any loss or damage arising directly or indirectly from the use of the Company's products irrespective of any information given to us as to intended use of such products. It is therefore recommended that prospective users should test a sample of this product under their own conditions to satisfy themselves that the product is suitable for the purpose intended.

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