

## PRODUCT

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'. Being of a laminated construction it overcomes the need for a separate isolation layer

## FEATURES and 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

## 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/m<sup>2</sup> (WB5) or 10 kg/m<sup>2</sup> (WB10) surface weights.

FL-L uses an acoustic grade lead sheet mass barrier of either 5kg/m<sup>2</sup> (L5) or 10 kg/m<sup>2</sup> (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:

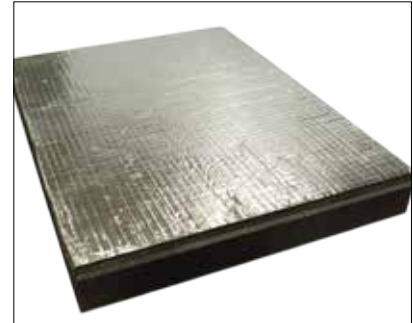
SA self adhesive backing

CO Class '0' foil facing

F6 Acoustic foam 6mm thick

F12 Acoustic foam 12mm thick

F25 Acoustic foam 25mm thick



## ACOUSTIC PERFORMANCE

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

### Tested and Rated according to:

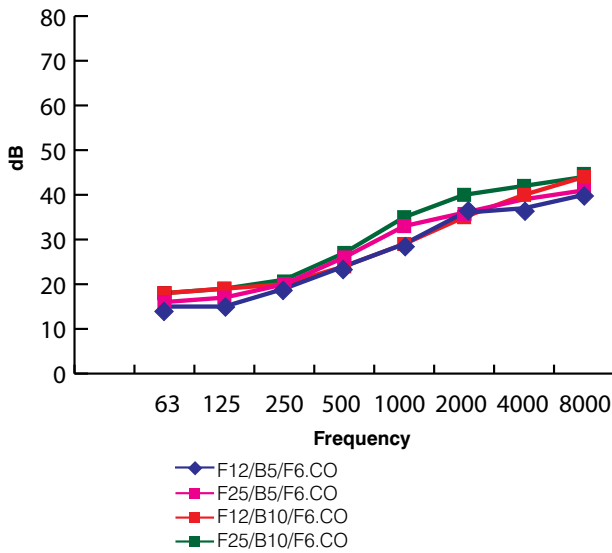
BS EN ISO 717-1  
BS EN ISO 10140-2

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.

### Airborne Sound Reduction Index - Polymeric Versions

Format \ Hz	63	125	250	500	1k	2k	4k	8k
F12/B5/F6.CO	16	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
SF25/B10/F6.CO	18	19	21	27	35	40	42	44

### Airborne Sound Reduction Index - Polymeric Versions

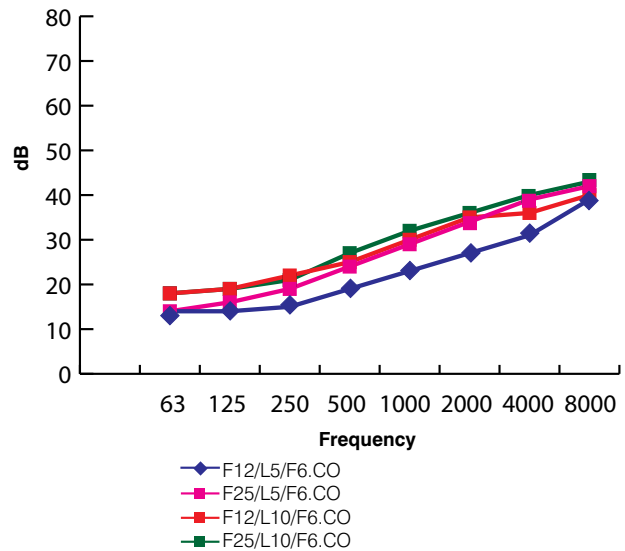


FL-L is a composite of two layers of Polyurethane acoustic foam, with an inner isolated layer of heavy mass acoustic grade lead sheet barrier.

### Airborne Sound Reduction Index - Lead Versions

Format \ Hz	63	125	250	500	1k	2k	4k	8k
F12/L5/F6.CO	14	14	15	19	23	27	31	39
F25/L5/F6.CO	14	16	19	24	29	34	39	42
F12/L10/F6.CO	18	19	22	25	30	35	36	40
F25/L10/F6.CO	18	19	21	27	32	36	40	43

### Airborne Sound Reduction Index - Lead Versions



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

### SELECTION GUIDELINES

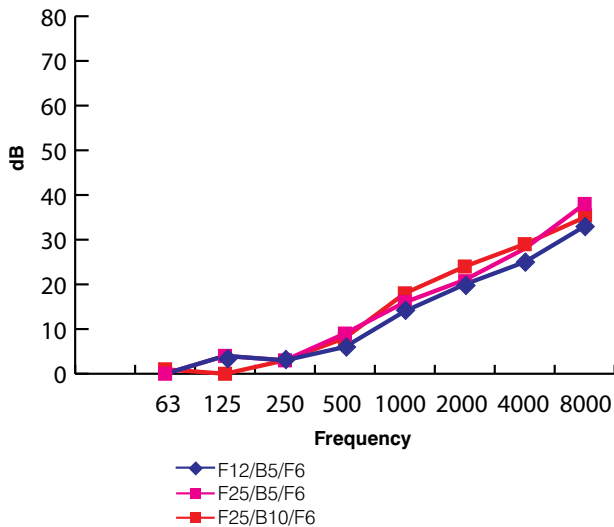
CMS Danskin Acoustics have recognised the complex problems associated with noise breakout from ductwork and have developed performance data from laboratory test results. This performance data predicts, as closely as possible, the minimum likely improvement achievable by lagging a duct with foam laminate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

### Duct Breakout Insertion Loss Values - Polymeric Versions

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

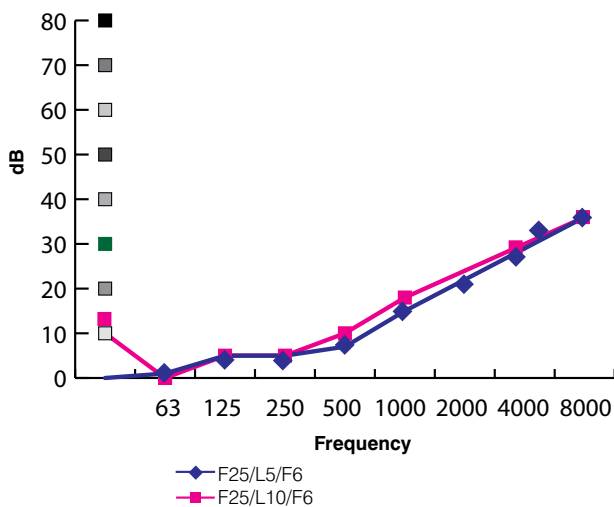
## Duct Breakout Insertion Loss Values - Polymeric Versions



## Duct Breakout Insertion Loss Values - Lead Versions

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

## Duct Breakout Insertion Loss Values - Lead Versions



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 SuperLag 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.