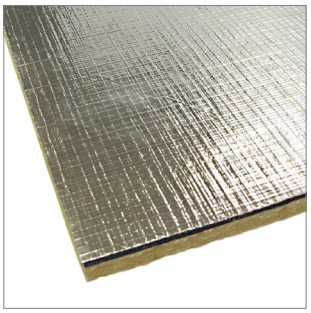
SUPERLAG®
Prime Flexilag

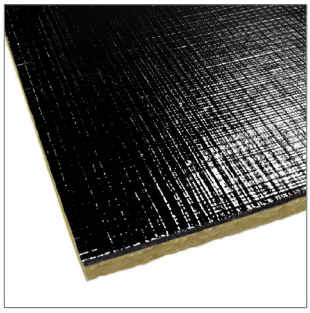
CMSDANSKIN ACOUSTICS

Technical Data Sheet

PRODUCT

CMS Danskin Acoustics SUPERLAG® Prime Flexilag is a highly flexible material consisting of a three part laminate, incorporating a spacer or isolating layer, a very flexible heavy mass layer and an outer vapour barrier. Being of a laminated construction it overcomes the need for a separate isolation layer normally required beneath most forms of acoustic lagging.





FEATURES and BENEFITS

- Easy and quick to apply
- Excellent acoustic performance
- Applied as a single layer treatment
- Highly durable
- Low thermal conductivity
- Highly flexible suitable for installation on smaller pipes

APPLICATIONS

CMS Danskin Acoustics SUPERLAG® Prime Flexilag is a highly efficient acoustic insulation lagging for ductwork, pipes, enclosures and similar applications where a considerable reduction in the passage of noise is required, combined with ease of application.

TECHNICAL INFORMATION

Glass fibre spacer density	16-24 kg/m³ nominal
Service temperature	-30 to 100ºC
Chemical resistance	Oils, water, most solvents
Reaction to Fire (EN 13501-1)	C-s1,d2

PHYSICAL INFORMATION

Dimensions

Standard sheet size: 2m x 1.2m. Other sizes are available upon request.

Grades

CMS Danskin Acoustics SUPERLAG® Prime Flexilag is available in four grades to suit different performance requirements:

Grade	Barrier Mass (kg/m²)	Thickness (mm)	Minimum Pipe Diameter*
SUPERLAG® Prime Flexilag 5/25	5	20	100mm
SUPERLAG® Prime Flexilag 5/50	5	37	100mm
SUPERLAG® Prime Flexilag 10/25	10	25	150mm
SUPERLAG® Prime Flexilag 10/50	10	40	150mm

* minimum recommended pipe diameter for practical installation

ACOUSTIC PERFORMANCE

CMS Danskin Acoustics SUPERLAG® Prime Flexilag is a high performance material that has been acoustically tested at certified independent test laboratories.

Tested and Rated according to:

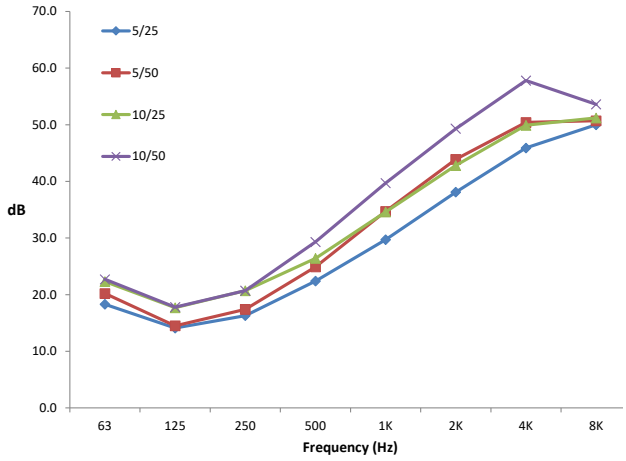
BS EN ISO 717-1
BS EN ISO 10140-1

SUPERLAG® PRIME FLEXILAG (no supporting materials)

Airborne Sound Transmission Loss

(non UKAS accredited)

Material	Frequency								R_w (C;Ctr)
	63	125	250	500	1k	2k	4k	8k	
5/25	18.3	14.1	16.3	22.4	29.7	38.1	45.9	50.0	28 (-1;-4)
5/50	20.2	14.5	17.4	24.9	34.7	43.9	50.4	50.7	30 (-1;-5)
10/25	22.3	17.7	20.7	26.4	34.6	42.8	49.9	51.2	32 (-1;-4)
10/50	22.7	17.8	20.7	29.3	39.7	49.3	57.8	53.6	34 (-2;-5)

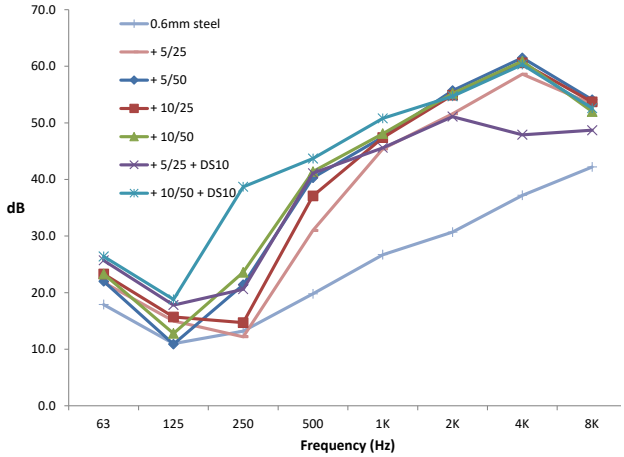


SUPERLAG® PRIME FLEXILAG (on 0.6mm sheet steel)

Airborne Sound Transmission Loss

(non UKAS accredited)

Material	Frequency								R_w (C;Ctr)
	63	125	250	500	1k	2k	4k	8k	
0.6mm steel	17.9	11.0	13.2	19.8	26.7	30.7	37.2	42.2	25 (-1;-4)
+ 5/25	21.8	15.0	12.2	31.0	45.4	51.6	58.6	53.3	30 (-3;-7)
+ 5/50	22.0	10.9	21.4	40.3	47.5	55.7	61.5	54.1	34 (-3;-8)
+ 10/25	23.3	15.7	14.7	37.1	47.4	54.9	60.6	53.7	32 (-3;-7)
+ 10/50	23.3	12.8	23.6	41.4	48.1	55.2	60.9	52.0	36 (-3;-8)
+ 5/25 + DS10	25.7	17.8	20.6	41.1	45.6	51.1	47.9	48.7	37 (-3;-8)
+ 10/50 + DS10	26.4	18.8	38.7	43.7	50.8	54.7	60.3	52.6	45 (-3;-10)



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 SUPERLAG® Prime Flexilag products.

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

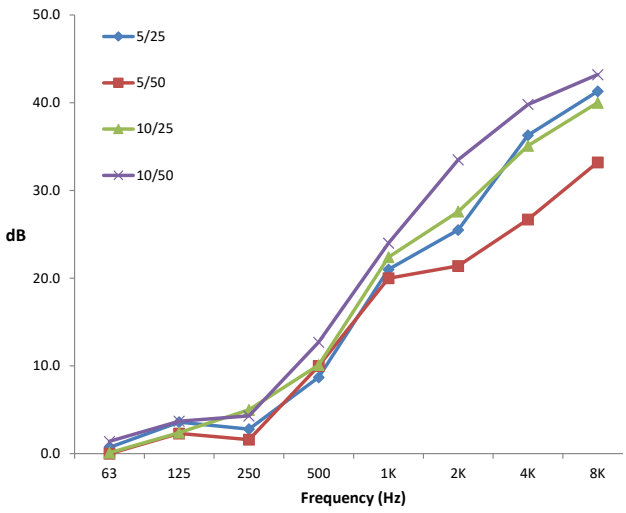
SELECTION GUIDELINES

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 SUPERLAG® Prime Flexilag 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 SUPERLAG® Prime Flexilag, with the noise reduction of the original untreated ductwork being removed from this performance data.

SUPERLAG® PRIME FLEXILAG DUCT BREAKOUT
Airborne Sound Transmission Loss
(non UKAS accredited)

Material	Frequency							
	63	125	250	500	1k	2k	4k	8k
5/25	0.7	3.6	2.8	8.7	21.0	25.5	36.3	41.3
5/50	0.0	2.3	1.6	10.0	20.0	21.4	26.7	33.2
10/25	0.1	2.4	5.0	10.1	22.4	27.6	35.1	40.0
10/50	1.4	3.7	4.3	12.7	24.0	33.5	39.8	43.2



The acoustic performance of CMS Danskin Acoustics SUPERLAG® Prime Flexilag can further enhanced by applying on top of a layer of glass or mineral fibre slab up to 300mm thick where very high performance levels are required.

To boost the performance and reduce low frequency noise breakout, CMS Danskin Acoustics DS type damping sheet should be applied to the ductwork before installing the SUPERLAG® Prime Flexilag.

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 SUPERLAG® Prime Flexilag will completely lap the circumference can be insulated without the need for adhesives or extra mechanical fixings. Mating edges should be sealed with Class '0' foil faced adhesive tape to match the finish required. The SUPERLAG® Prime Flexilag insulation can be secured to large round ducts using proprietary banding systems, in conjunction with an aluminium foil edge tape.

Rectangular ductwork

Rectangular ducts normally require additional support for the SUPERLAG® Prime Flexilag in the form of contact adhesive and/ or proprietary insulation fixings, particularly on the underside where the SUPERLAG® Prime Flexilag 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 SUPERLAG® Prime Flexilag will be compressed at the corners, thus affecting performance.

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