



# **LATIMER ACOUSTICS** **noise solution materials**

## **dBX noise barriers** **PRODUCT GUIDE**

[www.latimeracoustics.com](http://www.latimeracoustics.com)

THIS BROCHURE DESCRIBES THE CONTROL OF AIRBORNE NOISE USING dBX NOISE INSULATION FROM LATIMER ACOUSTICS. IT COVERS THE PRINCIPLES, DESIGN CONSIDERATIONS AND INSTALLATION METHODS FOR CONTROLLING AIRBORNE NOISE WITHIN BUILDINGS.



CONTENTS

Noise Problem Defined	2
Product Solution	2
Solution Research	2
Product Introduction	3
Production Construction	3
Environmental Impact	3
Product Application	4
Product Properties	4
Performance Characteristics	5
Acoustic Performance	5
Durability	6
Specification Guide	6
Product Installation	6
Site Handling	6
Storage	6

Note: Information contained in this brochure may be subject to change. When specifying dBX it is important to follow the most recent advice and recommendations.

## > Noise Problem Defined

Noise energy transmission from one area to another is controlled by providing a barrier to the noise path. dBX gains maximum noise reduction from its limp and heavy nature, giving maximum noise reduction on a weight-to-thickness ratio.

When shielding an enclosed area from an external noise source, the product used must contain a heavy mass-loaded barrier. This will deflect the noise back towards the noise source, reducing it from being transmitted into the enclosed area.

## > Product Solution

dBX represents the latest in European product technology. It is used to improve transmission loss in walls and ceilings, reduce the level of cross-talk between acoustically sensitive rooms and reduce noise intrusion from external noise sources such as traffic and aircraft.

- Reduces inter-office noise transmission providing comfort, privacy and confidentiality.
- Controls external noise problems from aircraft, traffic and rain noise.
- Increases performance of existing structures in retro-fit, by fitting over existing walls and covering with plasterboard.
- No added phthalate plasticisers.
- Meets stringent EU environmental standards due to low toxicity.
- Transmission loss across a wide range of frequencies.
- Unique flexibility allows for easy installation in tight corners and complex fit-out.
- Low maintenance Reinforced Foil facing is available to provide a robust surface finish, ensuring protection from damage.
- Moisture proof, dust proof and chemical resistant.
- Easy sealing of joins and edges prevents deterioration.
- No specialist tools or equipment required for installation.

## > Solution Research

Initially dBX was developed and extensively researched for the premium European automotive industry, expanding into other markets as its' unique benefits were realised. Continuing research sees it now applied over a wide range of acoustic applications outside the automotive industry.



*dBX removes the resonant performance dip in plasterboard walls.*



*dBX used to control cross talk promoting inter-office privacy.*



*dBX is easily joined and penetrations resealed. As a non PVC product, taping and sealing penetrations is possible with a tape system.*

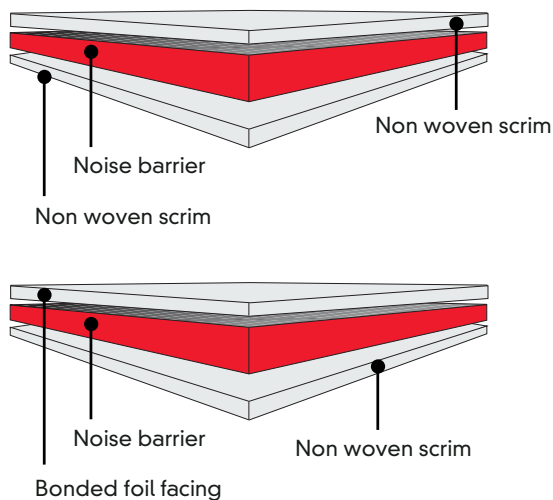


*dBX is used in roof applications for the control of internal and external environmental noise problems.*

## > Product Introduction

dBX is used to increase transmission loss, reducing noise moving from one area to another and is suitable for a wide range of applications due to its flexibility and low thickness to weight ratio. dBX is an elastomeric polymer mass loaded barrier used to add extra mass, or hung as a barrier curtain for increased transmission loss and noise reduction.

## > Product Construction



### **NOISE BARRIER • 5KG/M<sup>2</sup> AND 8KG/M<sup>2</sup>**

dBX reduces noise through its elastomeric polymer barrier, loaded with inert high-density fillers. This combination creates a heavy mass barrier, maximising noise reduction. The product utilises a high quality polymer base material and is available in 5kg/m<sup>2</sup> and 8kg/m<sup>2</sup> standard barrier weights and from 2kg/m<sup>2</sup> to 12kg/m<sup>2</sup> on indent.

### **FACING • NON WOVEN SCRIM OR BONDED FOIL**

dBX is supplied as standard with a non woven scrim covering or Bonded Foil facing. dBX can also be supplied plain, without any additional surface finish, available on indent only.

- Bonded Foil (BF) is a strong reinforced foil facing, giving improved fire test results to AS1530, Part 3, Early Fire Hazard properties. The foil's robustness adds to the overall product strength, allowing it to be hung, self supporting. Matching tape is supplied to enable easy installation and sealing. When used in conjunction with an air gap, the foil facing offers improved thermal conductivity, in a manner similar to building foil.
- Non woven scrim reinforcing gives the product greater mechanical strength when used in applications requiring self-supporting characteristics or fabrication.

## > Environmental Impact

dBX utilises an elastomeric polymer base, which maximises product flexibility without the use of phthalate plasticisers. The issue of plasticiser migration has long been a problem for vinyl based noise control products, as the out-gassing of plasticisers causes deterioration in the product. dBX is able to provide product flexibility, enabling easier installation, and long-life acoustic performance, without requiring the addition of phthalate plasticisers.

dBX meets the requirements of the most stringent European environmental standards as being safe for use in building construction. The low toxicity of dBX's elastomeric polymer base offers tangible benefits from cost savings during construction through to reducing the risks of "sick building" syndrome. The use of vinyl or PVC based noise control materials has significantly decreased in recent years, particularly in Europe, where the material's use has been restricted through legislation enacted in response to a series of fatal fires, in which the loss of life was partly caused by the release of toxic fumes from PVC materials.

The use of PVC is also highly discouraged in the construction of "green buildings". The green building initiatives aim to reduce the environmental impact of buildings, improve occupant health and productivity, and achieve real cost savings. dBX is able to deliver on all of these attributes through its cost-effective, environmentally friendly, non-toxic elastomeric polymer base. dBX is also 100% recyclable, providing further environmental benefits.



*dBX is easily installed, fixed and cut without specialist tools or skills.*

## > Product Application

dBX is designed as a noise barrier for increasing transmission loss of existing walls or partitions. It can be hung as a barrier curtain, used to increase transmission loss of dry wall partitions, ceilings, doors, flexible duct connectors or where a noise barrier only is required.

Used as a layover in ceilings or floors in multi-storey buildings, dBX can also be laminated between plywood to create a high-mass construction element.

## > Product Properties

### PHYSICAL CHARACTERISTICS

dBX/5 (R) or (S)	dBX, 5kg/m <sup>2</sup> dBX noise barrier, non woven scrim covering, 1400mm x 10m roll (R), or sheets 1400 x 2300 mm (S), total thickness 2.6mm
dBX/8 (R) or (S)	dBX, 8kg/m <sup>2</sup> dBX noise barrier, non woven scrim covering, 1400mm x 5m roll (R), or sheets 1400 x 2300 mm (S), total thickness 3.7mm
dBX/5BF (R) or (S)	dBX, 5kg/m <sup>2</sup> dBX noise barrier, Bonded Foil facing, 1400mm x 10m roll (R), or sheets 1400 x 2300 mm (S), total thickness 2.6mm
dBX/8BF * (R) or (S)	dBX, 8kg/m <sup>2</sup> dBX noise barrier, Bonded Foil facing, 1400mm x 5m roll (R), or sheets 1400 x 2300 mm (S) total thickness 3.7mm

\* dBX/8BF and other barrier weights and finishes available on indent

### MECHANICAL PROPERTIES

Properties	dBX/5	dBX/8
Specific gravity	1.966g/cm <sup>3</sup>	2.016g/cm <sup>3</sup>
Tensile strength DIN 53504 S2	1.6N/mm <sup>2</sup>	1.2N/mm <sup>2</sup>
Elongation at break	468%	396%
Dimensional stability (4 hours @ 100°C)	-1.3% - + 1.5%	-1.3% - + 0.8%
Hardness (Shore A, DIN 53 505)	83 HS (A)	85 HS (A)



*dBX economically and efficiently provides for cross talk reduction promoting office privacy*

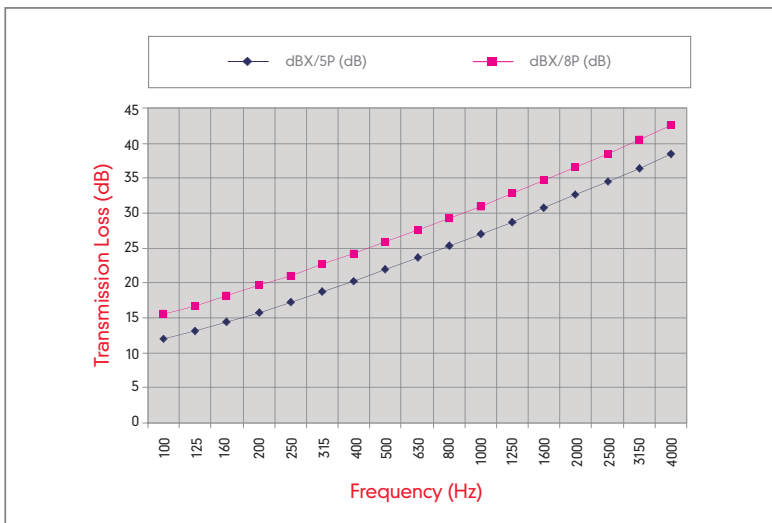
# dBX noise barriers

## > Performance Characteristics

Product Code	AS1530, Part 3	Maximum Operating Temp.
dBX/5	N/A	70°C
dBX/8	N/A	70°C
dBX/5BF	0.0.0.0	100°C
dBX/8BF	0.0.0.0	100°C

## > Acoustic Performance

Product Code	Weighted Sound Reduction Index
dBX/5	R <sub>w</sub> 27 @ 5kg/m <sup>2</sup>
dBX/8	R <sub>w</sub> 30 @ 8kg/m <sup>2</sup>
dBX/5BF	R <sub>w</sub> 27 @ 5kg/m <sup>2</sup>
dBX/8BF	R <sub>w</sub> 30 @ 8kg/m <sup>2</sup>



	dBX 8.0 kg/m <sup>2</sup>	dBX 5.0 kg/m <sup>2</sup>
100	16	12
125	17	13
160	18	14
200	20	16
250	21	17
315	23	19
400	24	20
500	24	20
630	28	24
800	29	25
1000	31	27
1250	33	29
1600	35	31
2000	37	33
2500	38	31
3150	40	36
4000	42	38
5000	44	40
6300	46	42
8000	48	44
10000	50	46

## > Durability

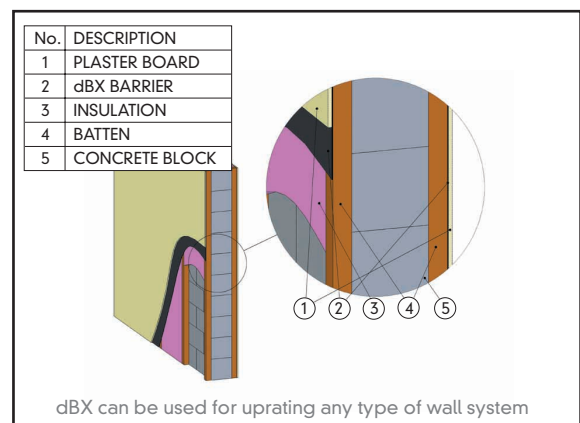
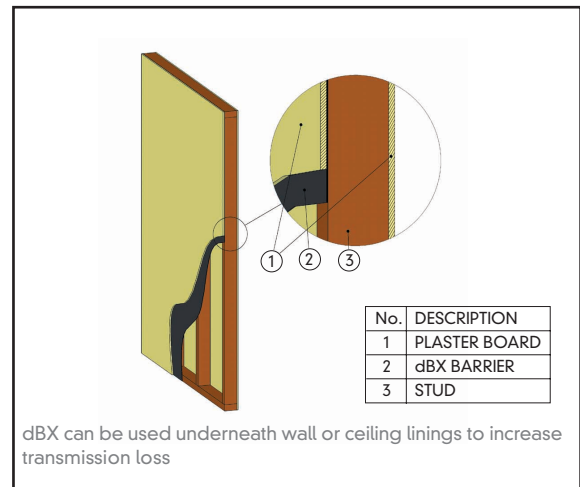
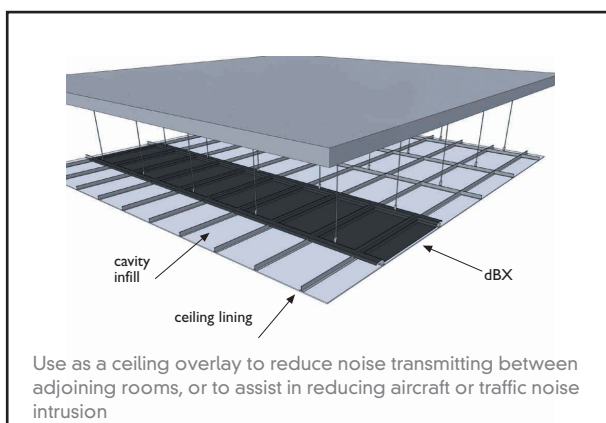
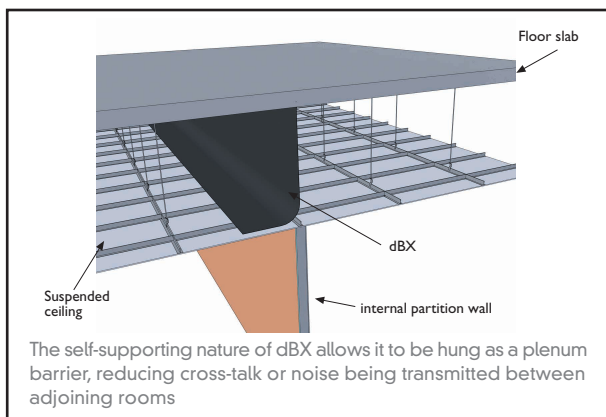
dBX has excellent durability and there are no known limitations on the serviceable life of the products, provided the material is used for its designed purpose, and installed and maintained according to the specification provided by the manufacturer.

## > Specification Guide

The noise insulation shall be "dBX", made from a polyolefin with non woven scrim covering (or with Bonded Foil facing) and with a barrier weight of 5kg/m<sup>2</sup> with a minimum R<sub>w</sub> of 26 (or 8kg/m<sup>2</sup> with a minimum R<sub>w</sub> of 30).

## > Product Installation

dBX requires only a few basic tools to install. To cut dBX, a craft knife with disposable blades is recommended. Due to the self-supporting nature of dBX, it can be hung or suspended using a timber batten system. dBX can be mechanically fixed or bonded using contact adhesive, a small trial should be undertaken to ascertain the compatibility of the adhesive before final use.



## > Site Handling

As dBX noise barrier products use mass weight in their noise control system, care should be taken when lifting material as rolls of material can weigh from 56kg - 70kg. Normal lifting safety procedures should be employed for roll lifting. When using the material in ceiling or plenum cavities the material should be pre-cut before lifting in situ.

## > Storage

dBX noise barriers should be stored in a clean and dry area protected from possible damage from impacts or abrasions. The material should be stored on a flat level floor with a protective layer between the material and the floor. When supplied in rolls, the product should not be stacked more than 3 rolls high to avoid crushing of the bottom rolls. During storage or transport, excess heat should be avoided to prevent damage to the product as it can take a thermal set.

For further information please refer to our website [Product Reference 221A](#)



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NB: This information is meant as a guide only and should not be read as a guarantee for any specific application. All volumes and measurements are nominal, any flammability test specification is only a numerical rating and does not attest to the materials performance in case of actual fire. Published 09/07