



LATIMER ACOUSTICS **noise solution materials**

dBX carpet underlay
PRODUCT GUIDE

www.latimeracoustics.com

THIS BROCHURE DESCRIBES THE CONTROL OF AIRBORNE SOUND USING dBX CARPET UNDERLAY SOUND INSULATION FROM LATIMER ACOUSTICS. IT COVERS THE PRINCIPLES, DESIGN CONSIDERATIONS AND INSTALLATION METHODS FOR CONTROLLING AIRBORNE AND IMPACT SOUND FROM FLOOR-TO-FLOOR WITHIN BUILDINGS.



C O N T E N T S

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

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

> Noise Problem Defined

The trend towards high-density living environments and lightweight building construction over the last decade has led to an increase in intrusive noise from neighbours and external noise sources.

When shielding a room from an external noise source, such as noise between floors in a multi-storey building, 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 room, controlling impact and airborne noise.

> Product Solution

dBX Carpet Underlay, while used in the same way as standard carpet underlay, provides excellent levels of transmission loss to assist in reducing airborne floor-to-floor noise.

- Acoustically and thermally seals gaps and cracks in flooring
- Maximum noise reduction
- Superior comfort
- Reduction of airborne and impact noise
- Helps reduce room reverberation through sound absorption
- High quality hard-wearing bonded foam
- Easy to install and fit
- Easily cut and shaped
- Non-fibrous



dBX Carpet Underlay, laid using standard installation techniques

> Product Introduction

dBX underlay products are designed for use in multi-story buildings to control noise from floor-to-floor.

dBX Carpet Underlay combines all the benefits of high-grade underlay foam with a mass loaded noise barrier, controlling impact and airborne noise.

> Product Construction

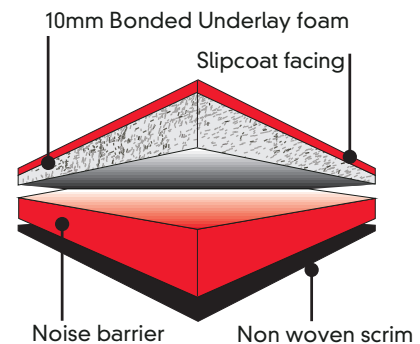
BONDED UNDERLAY FOAM - 10MM

dBX Underlay, a high grade bonded underlay, uses hydrolysis resistant polyether foam, with a supporting mesh and slip coat facing. It is manufactured to underlay thickness and is designed to maximize acoustic performance, is fibre free, easily installed and fitted.

dBX NOISE BARRIER - 5KG/M² BARRIER

The dBX noise barrier reduces noise through its unique construction. The specialist fillers create a heavy flexible mass barrier, maximizing noise reduction.

dBX noise barrier allows effective, easy installation, essential in achieving a noise-tight seal.



Luxurious functionality

> Environmental Impact

dBX barrier 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 outgassing of plasticisers causes deterioration in not only the product, but also in the product's acoustic performance. 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.

> Product Properties

PHYSICAL CHARACTERISTICS

Product Code	dBXUL/5
Product Description	dBX CARPET UNDERLAY, 10mm bonded underlay foam with slipcoat, 5kg/m ² noise barrier, 1350mm x 2300mm sheet, total thickness 12mm
Maximum Operating Temperature	70°C

Foam Properties

Description	Bonded polyether polyurethane foam
Density (BS 443: 1969) (AS 2281)	95 kg/m ³

> Product Application

dBX Carpet Underlay has all the benefits of a high quality underlay combined with high loss of both impact and airborne noise in industrial, domestic and commercial applications both in two-storey and high-rise buildings. Manufactured 12mm thick, it is used as normal underlay. dBX Carpet Underlay provides an acoustic seal on tongue and groove floors.

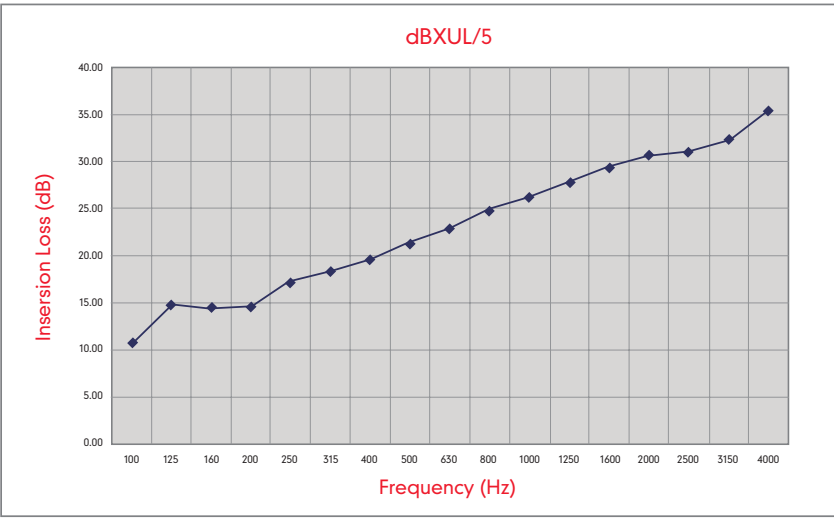


dBX underlay used to improve intertenant noise problems in refurbished buildings



> **Acoustic Performance**

Product Code	dBXUL/5
Acoustic Properties	R _w 27@5kg/m ²



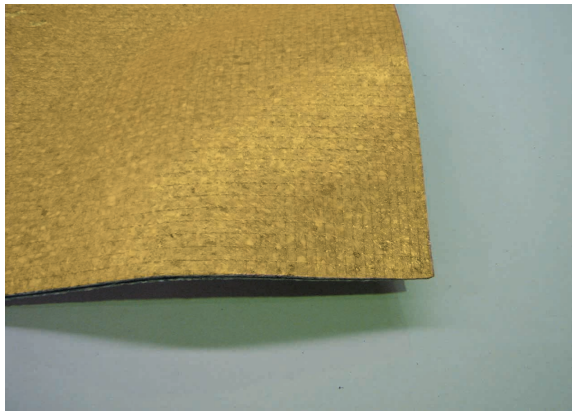
Frequency (Hz)	Transmission Loss [dB]
100	10.70
125	14.70
160	14.40
200	14.60
250	17.10
315	18.30
400	19.60
500	21.30
630	22.80
800	24.80
1000	26.20
1250	27.80
1600	29.30
2000	30.70
2500	31.00
3150	32.30
4000	35.30
S.T.C.	26.00

> **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 Carpet Underlay", made from dBX noise barrier with a barrier weight of 5kg/m² with a minimum R_w of 27. The absorbing layer shall be made of bonded polyether polyurethane underlay foam at 95kg/m³ with a slip coat facing.



dBX Carpet Underlay slip coat covering ensures carpet can be tilted without rucking.

dBX carpet underlay

> Product Installation

dBX underlay products are simple to cut and handle, requiring only a few basic tools to install.

dBX underlay should be laid using standard carpet laying techniques.

Note: Product is designed for loose laid carpet. If direct stick is required an alternative configuration can be ordered.

> 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 18kg - 28kg. Normal lifting safety procedures should be employed for roll lifting.

> Storage

dBX Carpet Underlay should be stored in a clean and dry area protected from possible damage from impacts or abrasions. The supplied sheets of material should be stored on a flat level floor with a protective layer between the material and the floor.

