



# iNSpira Acoustic Matting

iNSpira Acoustic Matting can be used above most lath and plaster and resiliently fixed double plasterboard ceilings to bring the overall floor / ceiling construction up to the standards of Approved Document E (2003)

## ADVANTAGES

- Meets Part E of the Building Regulations for BOTH airborne and impact noise
- Improves airborne sound insulation
- Simply laid under most floor finishes
- Easily cut and shaped
- Suitable for over timber or concrete floor structures

## PHYSICAL INFORMATION

### Dimensions

Standard sheet size: 1200 x 1000mm (nominal)

### Thickness

Available in 15mm or 12mm

### Weight

15 or 9kgm<sup>2</sup>

## STORAGE

iNSpira Acoustic Matting must be laid flat and kept dry. iNSpira Acoustic Matt should only be stored on site if the building has been sealed and is completely dry.

## SUITABLE FOR

- Households
- Hotels
- Gymnasiums
- Educational Buildings
- Hospital and Healthcare Buildings

## APPLICATIONS

iNSpira Acoustic Matting can be used above most lath and plaster and resiliently fixed double plasterboard ceilings to bring the overall floor / ceiling construction up to the standards of Approved Document E (2003).

## ACOUSTIC PERFORMANCE

Impact L' <sub>nT,w</sub> dB	Airborne D <sub>nT,w</sub> dB	Airborne D <sub>nT,w</sub> + C <sub>tr</sub> dB
48	55	50

Results based on iNSpira-Acoustic-Matting above plasterboard on metal frame ceiling

## CUTTING

By sharp long bladed trimming knife. Score the surface then run through with knife several times to avoid tearing. When shaping use large scissors or tin snips. A Circular saw should be used for large numbers of straight cuts.

## INSTALLATION SERVICE

In addition to supply of this product INS Acoustics offers a competitively-priced installation service anywhere in the UK. Use of our service ensures that installation is performed to the highest standards by tradesmen fully experienced in the specialist skills of fitting acoustic materials correctly.

For further details contact our technical team on 0151 677 8650.



## OVERVIEW

The nuisance of noise is regarded as a health and safety issue for persons living in dwellings and all occupants of a dwelling should be allowed to follow normal domestic activities including sleep and rest, without threat to their health from noise.

Noise is transmitted in buildings by both airborne and impact sound sources and UK Building Regulations requires that both these noise types are controlled. Practical guidance to meet with Building Regulation requirements is given within Approved Document E.

UK Building Regulations approved Document E 2003 incorporates a unit of measurement to determine low frequency airborne sound transmission.

Due to proven intrinsic difficulties of measuring low frequency sound, in domestic sized rooms, it must be expected that there could be significant deviations in the accuracy of these measurements. Furthermore, there will be variations from site to site due to structural differences in buildings, general site conditions and workmanship.

All these factors can influence the repeatability of both impact and airborne acoustic test results. Therefore, any test results must be considered as an indication only and no warranty can be given or implied as to the actual acoustic performance in any particular situation.

Sound insulation, in general terms, is the prevention of airborne and impact sound being transmitted from one part of a building to another through separating floors, ceilings or walls.

## AIRBORNE SOUND

Airborne sound sources produces noise by vibrating the surrounding air, for example speech, televisions and home entertainment systems. Airborne sound insulation is concerned with reducing this sound transmission through separating floors and walls.

## IMPACT SOUND

Impact sound sources produce noise by direct physical excitation of a part of a building, for example footsteps on a floor. Impact sound insulation is concerned with resisting this impact sound upon separating floors.

## FLANKING TRANSMISSION

Flanking transmission occurs when sound is transmitted from one space to another indirectly, through adjoining parts of the structure, eg. impact sound may be transmitted from one room to another through a timber floor, but also through the supporting wall.

Flanking transmission is always a potential problem within any structure, in particular, buildings being converted, and depending on the intensity of the acoustic energy received via flanking transmission paths, the effectiveness of sound insulation of separating partitions can be much lower than expected from their construction.

Potential flanking paths must be identified and eliminated prior to the installation of any sound insulation system.

## NEW APPROVED DOCUMENT E

Building Regulations New Approved Document E came into force on 1st July 2003 with the introduction of pre-completion testing (PCT) for sound insulation as a means of demonstrating compliance, and as from 1st July 2004 the use of Robust Details (RD) in new build has been accepted as an alternative to PCT.

Requirements E1, E2 and E3 of Document E apply to the sound insulation of any type of conversion or new build used as a dwelling including; houses, apartments, hostel rooms, hotels, boarding houses, halls of residence and residential homes. Requirement E4 applies to acoustic conditions in schools.

Performance standards are given for each requirement as follows:

**Table 0.1a** Dwelling-houses and flats – performance standards for separating walls, separating floors, and stairs that have a separating function

	Airborne sound insulation sound insulation $D_{nT,w} + C_{tr}$ dB (Minimum values)	Impact sound Insulation $L'_{nT,w}$ dB (Maximum values)
Purpose built dwelling - houses and flats		
Walls	45	-
Floors & stairs	45	62
Dwelling - houses and flats formed by material change of use		
Walls	43	-
Floors & stairs	43	64

**Table 0.1b** Rooms for residential purposes – performance standards for separating walls, separating floors, and stairs that have a separating function

	Airborne sound insulation sound insulation $D_{nT,w} + C_{tr}$ dB (Minimum values)	Impact sound Insulation $L'_{nT,w}$ dB (Maximum values)
Purpose built dwelling - houses and flats		
Walls	43	-
Floors & stairs	45	62
Rooms for residential purposes formed by a material change of use		
Walls	43	-
Floors & stairs	43	64

**Table 0.2** Laboratory values for new internal walls and floors within dwelling-houses, flats and rooms for residential purposes, whether purpose built or formed by material change of use

	Airborne sound insulation $R_w$ dB (Minimum values)
Walls	40
Floors	40



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