sound reduction systems
Manufacturers of Acoustic Insulation Products

Acoustilay Flooring Underlay System Datasheet

acoustilay

High performance acoustic flooring

NEW IMPROVED product

Acoustilay Flooring Datasheet

- ✔ *Improves airborne sound insulation*
- ✔ *Reduces impact noise*
- ✔ *Simply laid under most floor finishes*
- ✔ *Easily cut and shaped*
- ✔ *Minimises increase in floor level*
- ✔ *Easily and quickly installed*
- ✔ *Can be used to meet Part E of the Building Regulations*
- ✔ *Can allow access to existing floor*
- ✔ *100% Recyclable*
- ✔ *100% Sourced and manufactured in the UK*

Acoustilay is perfect for sound insulating floors in domestic situations and can be used above most Lath and Plaster and resiliently fixed, double plasterboarded ceilings to bring the overall floor / ceiling construction up to the standards of Approved Document E (2003)

INSTALLATION GUIDANCE

Carpet Finishes, Fitted with Gripper (Domestic only)

Acoustilay perimeter strips are nailed or glued around the perimeter of the room with the barrier layer facing down and the acoustic seal, compressed by two thirds, to the wall or skirting board. Carpet gripper rods are then nailed in place on top of the perimeter strip, raising them to the correct height to take the carpet. Acoustilay panels are tightly butted up to the perimeter detail, and loose laid in brick bond pattern onto the floor – care should be taken to ensure that no gaps occur between the Acoustilay and the Perimeter Strips or between the Acoustilay panels themselves.

Acoustilay

Vinyl Flooring, Carpet Tile & Bonded Carpet Finishes (Domestic & Commercial)

When installing Acoustilay beneath vinyl flooring, carpet tiles or bonded carpet, it is necessary to install Acoustilay MDF between them due to the resilient nature of the product. Acoustilay MDF prevents point loading and joint damage to the floor finish and also aids installation in the case of bonded carpet and carpet tile finishes.

The Acoustilay should be bonded to the sub-floor in brick bond pattern, using SRS Acoustilay Adhesive. Care should be taken that the Acoustilay is butted tight against the perimeter wall or skirting and that no gaps occur between the Acoustilay panels themselves. Acoustilay MDF is then bonded to the top of the Acoustilay with SRS adhesive. The Acoustilay MDF boards need to be bonded to each other using a PVA adhesive on the T&G joint, and any such joint should be a minimum of 50mm away from any Acoustilay joint. An isolation gap of 5-10mm should be left between the wall and the Acoustilay MDF to avoid sound transmission flanking into the structure, the isolation gap should be filled with a flexible sealer. The floor finish should then be installed on top of the Acoustilay MDF as per the manufacturer's instructions.

In areas where the floor covering is returned, a timber fillet, the same thickness as the Acoustilay, should be placed around the perimeter to create a solid edge.

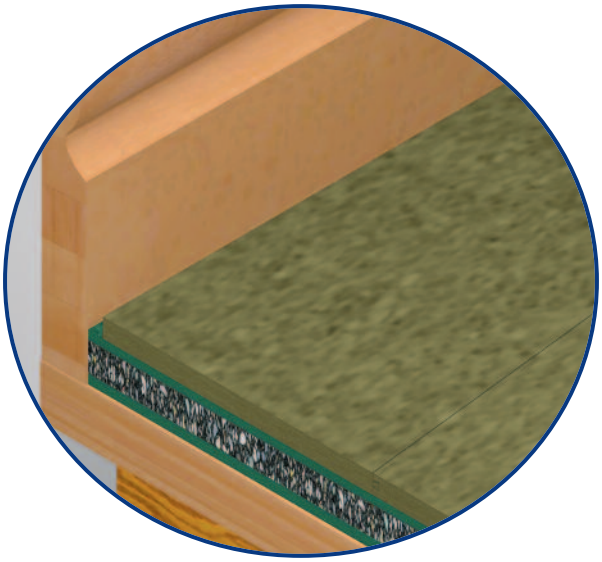
Please note that timber based products are prone to expansion and contraction, as such SRS recommend that expansion gaps are introduced across the Acoustilay MDF, as well as at the edges, in large applications. Further details on expansion gaps can be found at the Timber Research and Development Association website: www.trada.co.uk - if you have a large area to treat with Acoustilay MDF, SRS recommend that you contact TRADA for advice.

Decorative Timber Floor Finishes (Domestic)

In our experience, there is no issue installing Acoustilay 8 or 15 directly beneath solid wood and engineered timber floors in domestic installations. The Acoustilay should be installed as described in the 'Carpet Finishes, Fitted with Gripper' section, but without the perimeter strip detail – the Acoustilay should be butted tight up to the wall or skirting. As with all floating floor installations, no fixings should be allowed to penetrate the Acoustilay and an expansion gap should be allowed between

the timber floor and the perimeter wall and services. This should be filled with a flexible sealer.

For confirmation of the suitability of your timber floor for use with Acoustilay, you should check with the floor finish manufacturer prior to installation. If the manufacturer feels that the resilience of the Acoustilay is excessive, or if the installation occurs anywhere other than a domestic environment, the timber floor should be supported by installing a layer of Acoustilay MDF, bonded to the top of the Acoustilay. In this situation the full instructions of the 'Vinyl Flooring, Carpet Tile & Bonded Carpet' section should be followed.



MDF detail

If required, SRS will be happy to provide samples to the timber floor manufacturer for test purposes. The density of the open cell resilient layer in all the Acoustilay products is 135kg/m^3.

Stairs

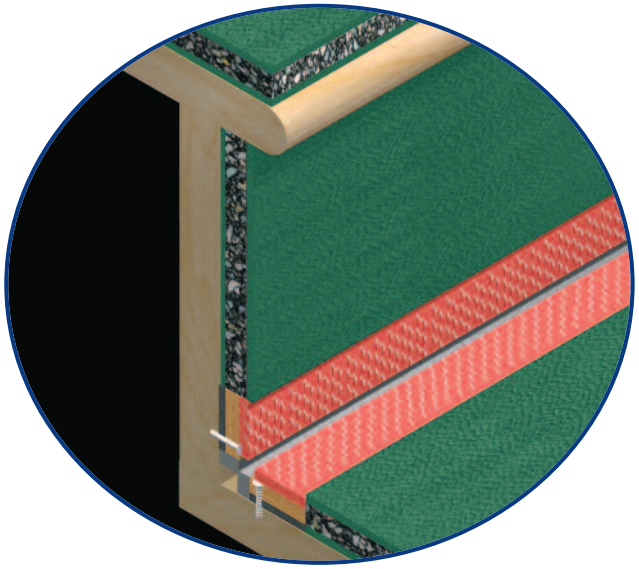
The Acoustilay panels should first be cut to the appropriate size. Acoustilay should then be bonded to the tread of the stair and, if airborne insulation is required, bonded to the riser using SRS Acoustilay Adhesive. Acoustilay 3 can be formed around the nosing of the stair, as with conventional underlay.

The Acoustilay 8 and 15 must be installed with Acoustilay Perimeter Strips. The perimeter strip is nailed to the tread or riser as displayed in the diagram. For the nosing detail, a fillet of MDF, the same thickness as the Acoustilay should be installed beneath the nosing to ensure a uniform height.

Fixtures and Fittings

When installing Acoustilay it is important not to fix directly though the product into the sub-floor due to the risk of sound bridging.

When items such as kitchen or bathroom units need to be securely fixed to the floor they should first be mounted and fixed onto an MDF plinth to the same height as the Acoustilay being used. Ideally the plinth will cover the footprint of the item and the Acoustilay can then be butted up to the MDF, maintaining a consistent floor level and providing secure fixing points. In the case of fitted cupboards and wardrobes, Acoustilay should be used to treat floors inside the cupboard to prevent flanking of airborne sound.

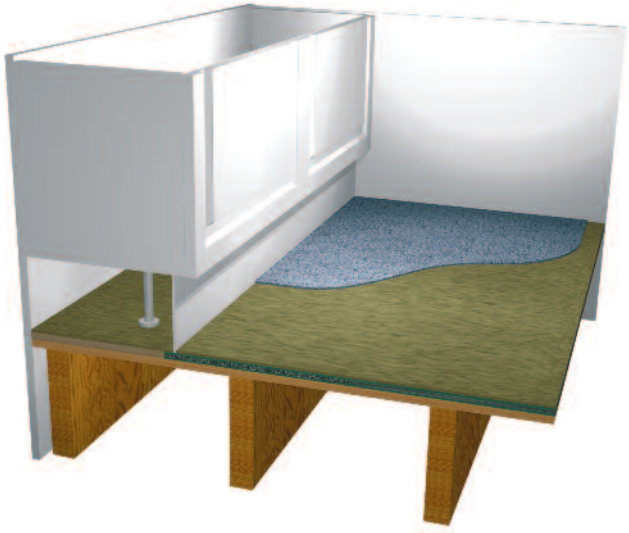


Stair detail

General Notes:

In all non domestic environments, such as offices, hospitals and schools, it is recommended that Acoustilay MDF is installed onto the Acoustilay regardless of the floor finish. Installing Acoustilay MDF, as detailed in the 'Vinyl Flooring, Carpet Tile & Bonded Carpet' section above, will eliminate the risk of the carpet rucking under wheeled furniture and protect both the floor finish and Acoustilay from heavy traffic wear.

The installation guidance in this datasheet is given in good faith and to the best of our knowledge. However, due to the number of floor finishes available, the final decision regarding the compatibility of any floor finish installed directly onto Acoustilay must remain the responsibility of the flooring contractor / installer or purchaser. If in any doubt, please seek advice from the floor finish manufacturer.



Kitchen unit detail

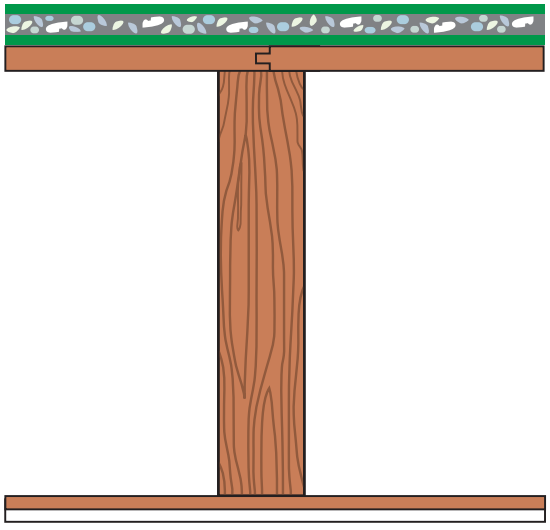
Building Regulations Part E – Resistance to the Passage of Sound

Dwelling-houses and flats - performance standards for separating floors, and stairs that have a separating function.	Airborne sound insulation $D_{nT,w} + C_{tr}$ dB (Minimum Values)	Impact sound insulation $L'_{nT,w}$ dB (Maximum Values)
Purpose built dwelling-houses or flats		
Floors and Stairs	45	62
Dwelling-houses or flats formed by material change of use		
Floors and Stairs	43	64

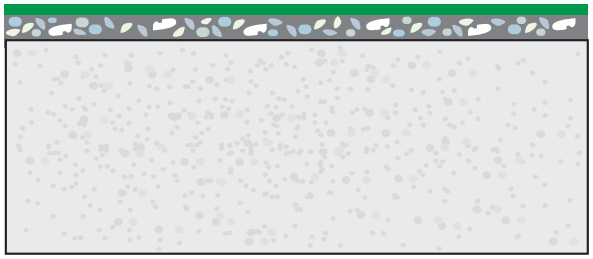
Rooms for residential purposes - performance standards for separating floors, and stairs that have a separating function.	Airborne sound insulation $D_{nT,w} + C_{tr}$ dB (Minimum Values)	Impact sound insulation $L'_{nT,w}$ dB (Maximum Values)
Purpose built rooms for residential purposes		
Floors and Stairs	45	62
Rooms for residential purposes formed by material change of use		
Floors and Stairs	43	64

Acoustic data for Acoustilay

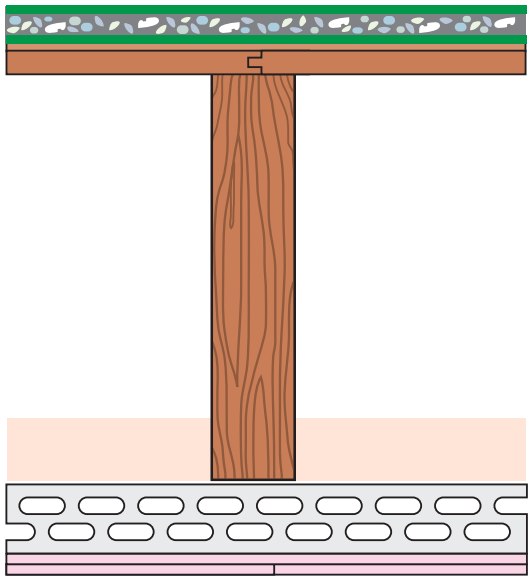
Acoustilay with a lath & plaster ceiling	Airborne $D_{nT,w}$ (dB)	Airborne $D_{nT,w} + C_{tr}$ (dB)	Impact $L'_{nT,w}$ (dB)
With Acoustilay 15 - without board	52	45	43
With Acoustilay 15 - with board	–	–	57



Acoustilay on a concrete floor	Impact $\Delta L'_w$ (dB)
Acoustilay 3 - without board	42
Acoustilay 15 - without board	42



Acoustilay above plasterboard on resilient bars	Airborne $D_{nT,w}$ (dB)	Airborne $D_{nT,w} + C_{tr}$ (dB)	Impact $L'_{nT,w}$ (dB)
Acoustilay 15 - with board	57	51	48



Acoustic tests on Acoustilay (lath and plaster ceiling) carried out independently by Noise Control Services at a site in Darwen on 03/11/03, (conducted prior to the ANC advice to impact test on a rigid board) in accordance with ISO 140 parts 4 and 7. Rated to ISO 717 parts 1 and 2. Test references: NCS 11031/1, NCS 11031/2. Impact test on Acoustilay, covered with a rigid board, carried out by Floorscan Installations & Surveys Ltd on 20/10/06, in accordance with ISO 140 part 7. Rated to ISO 717 part 2. Test Reference 1260.

Acoustic tests (concrete floor) carried out at University of Salford 23/05/96 to ISO 140 Part 8. Report number AT/96/47

Acoustic tests (above plasterboard) carried out by Floorscan Acoustic Installation & Surveys Ltd, 14/09/05 in accordance with ISO 140 parts 4 and 7. Rated to ISO 717 parts 1 and 2. Test reference numbers 195-3, 195-4 (results averaged over two tests).

acoustilay

Fire properties: The materials used in the manufacture of Acoustilay are flame retardant. The foam is Combustion Modified and meets Schedule 1 Part 1 of Statutory Instrument 1324 Amendment 1989. The surface barrier layer is self extinguishing to FMVS S302.

Compression and dynamic loading: Acoustilay has been tested in according with BS4098:1998 (1999) work of compression BS4052:1987 (1996) Dynamic loading test and meets the requirements of BS5808:1991 (1996) Classified luxury use, domestic/contract where high energy absorption is required.

Dimensions: Sheet size = 1200 x 1200mm

Thickness:	Acoustilay 15	15mm
	Acoustilay 8	12mm
	Acoustilay 3	10mm
Weight:	Acoustilay 15	15kg/m^2
	Acoustilay 8	8kg/m^2
	Acoustilay 3	3kg/m^2

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.

Storage: Must be laid flat and kept dry and protected from frost.

New, Improved Acoustilay Barrier Mat

Environmental Sustainability & Human Health Credentials

- UK manufactured – reduces carbon footprint.
- Acoustilay Barrier Mat is manufactured from 100% recycled polymer from pre Industrial, post industrial and the more important post consumer waste (polymer that has already had one 'lifetime' as another item).
- Recycled materials are sourced and tested for composition and quality by suppliers
- Barriers are free from vinyl choride monomers, lead, bitumen, unrefined aromatic oils. They are also not made using materials listed under ELV , RoHS and WEEE regulations and do not use any materials that are SVHC's (substances of very high concern) under REACH regulations.
- Fully sustainable product using abundant reclaimed and graded plastic waste. Proprietary formulation removes need for 'virgin' first lifetime plastic.
- Base plastic material uses very low levels of oil based derivatives in its original manufacture, consequently these barriers have generated minimal CO2 when compared to other polymers such as polyolefins (EPDM, PE etc.)
- Inherently safer in fire situations. Acoustilay Barrier has a greater natural fire resistance than other polyolefin based barriers that often need hazardous fire retardant chemicals to be added to achieve equal performance.
- Good organoleptic properties.
- New polymer has an excellent resistance to chemicals and mineral oils.

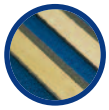
Patents & Trademarks

'Maxiboard' and 'Acoustilay' are registered trade names of Sound Reduction Systems Ltd. Both are patented products.

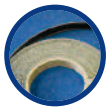
Maxiboard Patent No: GB2375358 Acoustilay Patent No: GB2287086

Acoustilay Accessories

Perimeter strip:
1200mm long x 25mm wide
Acoustilay 8 strip = 6mm thick
Acoustilay 15 strip = 9mm thick



Perimeter sealer:
Rolls 8m x 15mm wide and 3/15mm thick



Adhesive

Release tackifier:
10 litre tub - coverage up to 50m^2 per tub depending on substrate

Acrylic adhesive:
5 litre tub - coverage up to 20m^2 per tub depending on substrate

Acoustilay MDF:
1200 x 1200 x 6mm

SRS Ltd Acoustic Insulation Datasheets

Sound Reduction Systems Ltd are experts in all areas of sound insulation. For further information on their range of products and systems for reducing sound transmission in buildings and meeting the acoustic requirements of the Building Regulations Approved Document E, please see the following datasheets, which are easily obtained by calling 01204 380074 or downloading from www.soundreduction.co.uk.

Ceilings:
- Maxi 60 Ceiling
- Maxiboard beneath existing plasterboard / lath and plaster
- Maxiboard beneath concrete beam and block
- Maxiboard on a British Gypsum MF ceiling

Walls:
- Maxi HP Partition System
- Maxiboard installed with new/existing stud
- Maxiboard installed on new/existing masonry

Floors:
- Maxideck
- SubPrimo

If you are unsure of which product or system you require, please contact our industry leading technical department on Tel: 01204 380074 or email info@soundreduction.co.uk for free, friendly advice.

Institute of Acoustics sponsoring organisation

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