sound reduction systems

Manufacturers of Acoustic Insulation Products

Acoustilay Flooring Underlay System Datasheet

Key Benefits

- SRS offer a range of Acoustilay products to improve both impact and airborne sound insulation performance.
- Improves performance of timber and concrete substrates
- Suitable for use beneath a variety of 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 the perfect product for sound insulating floors in domestic situations and 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 Building Regulations Approved Document E (2003). Acoustilay can also be used to enhance the acoustic performance of our Maxiboard fire and acoustic rated ceiling systems (see seperate datasheet).

INSTALLATION GUIDANCE

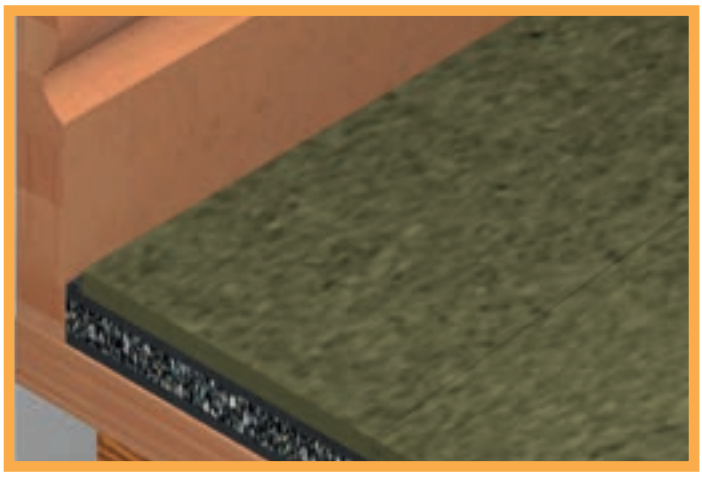
Carpet Finishes, Fitted with Gripper (Domestic only)

Acoustilay Perimeter Strips are nailed or glued around the perimeter of the room with the barrier layer facing downwards 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 Acoustilay Perimeter Strip. Acoustilay panels are tightly butted up to the perimeter detail, and loose laid in brick bond pattern onto the floor.

Acoustilay installed on a floor with perimeter strip and carpet gripper

Care should be taken to ensure that no gaps occur between the Acoustilay and the Acoustilay Perimeter Strips or between the Acoustilay panels themselves. Acoustilay 3 and 8 should be installed with the embossed black barrier mat facing upwards.

Laminate, Vinyl, Carpet Tile, and Bonded Carpet floor finishes (Domestic & Commercial)



MDF detail

When installing Acoustilay beneath laminate flooring, vinyl flooring, carpet tiles, or bonded carpet, it is necessary to install Acoustilay MDF between the Acoustilay and the floor finish. The use of Acoustilay MDF improves stability for the floor finish and prevents problems due to point loading, carpet rucking, and joint damage to the floor finish. In the case of bonded carpet and carpet tile floor finishes the use of Acoustilay MDF will also aid the installation by giving a stable surface to bond to.

Acoustilay should be bonded to the sub-floor in brick bond pattern, using SRS Acoustilay Adhesive. Care should be taken that Acoustilay panels are butted tight against the perimeter wall or skirting and that no gaps occur between the Acoustilay panels themselves. Acoustilay 3 and 8 should be installed with the embossed black barrier mat facing upwards. Acoustilay MDF should then be 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 SRS Acoustic Sealant. The floor finish should then be installed on top of the Acoustilay MDF as per the manufacturer's instructions.

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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.

Engineered Timber Floor Finishes (Domestic)
In our experience, there is no issue installing Acoustilay 8 or 15 directly beneath engineered timber floors in domestic installations. The Acoustilay should be installed as described in the 'Hessian Backed 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 SRS Acoustic Sealant or alternative flexible sealer.

For confirmation on the suitability of any engineered timber floor for use with Acoustilay, please check with the floor finish manufacturer prior to installation. If the floor manufacturer feels that the resilience of the Acoustilay is excessive, or if the installation occurs anywhere other than a domestic environment, SRS recommend that 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.

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

Ceramic and Stone Tiles
SRS recommends that Acoustilay 3, 8, and 15 are not suitable for use beneath ceramic and stone tiles, as the product will not provide adequate stability even if an MDF board is used over the product. Instead, we recommend that Acoustilay TileMat is used in areas where these kinds of floor finishes are required. For further information please see the Acoustilay TileMat datasheet.

Stairs (Domestic, Hessian-Backed Carpet Finishes)
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 and using Acoustilay 8 or 15, Acoustilay 3 can be formed around the nosing of the stair, as with conventional underlay.

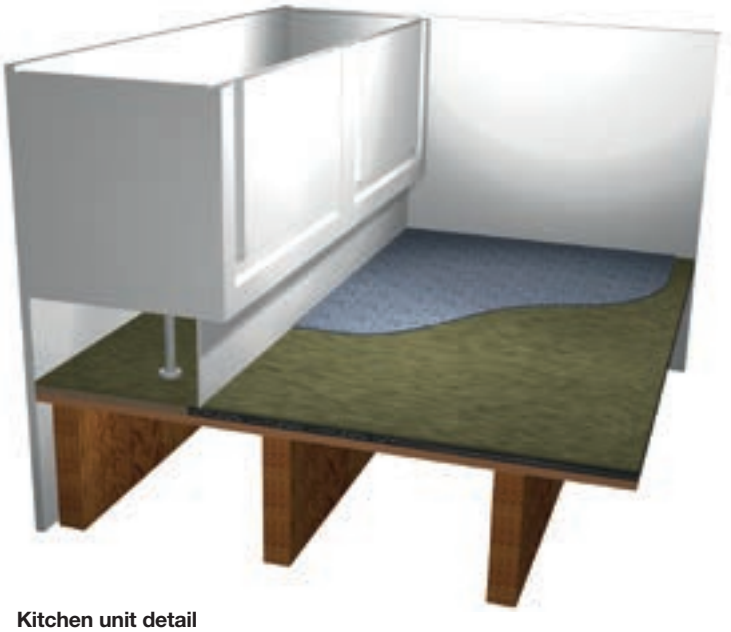
Acoustilay 3 and 8 should be installed with the embossed black barrier mat facing upwards.

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.

Stair detail

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.



Kitchen unit 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 'Laminate Flooring, Vinyl Flooring, Carpet Tile & Bonded Carpet Finishes' section, will eliminate the risk of the carpet rucking under wheeled furniture and protect both the floor finish and Acoustilay from heavy traffic wear.

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

Good practice applies in all cases. Prior to installation of Acoustilay the floor should be level, clean, and dry. Acoustilay should be allowed to acclimatise to site conditions prior to installation.

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 and plaster ceiling			
	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 ΔL_w (dB)
Acoustilay 3 - without board	42
Acoustilay 15 - without board	42

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

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Acoustilay above Maxi 60 Ceiling			
	Airborne $D_{nT,w}$ (dB)	Airborne $D_{nT,w} + C_{tr}$ (dB)	Impact $L'_{nT,w}$ (dB)
Acoustilay 8 - without board	58	52	30

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).

Acoustic tests on Maxi 60 ceilings carried out independently by Noise Control Services, 02/06/03. The tests, on Acoustilay 8 above the Maxi 60, were conducted prior to the changes to the ANC PCT scheme that now requires impact sound insulation tests to be conducted on a rigid board, when a proprietary underlay has been installed. The tests were carried out in accordance with ISO 140 parts 4 and 7. Rated to ISO 717 parts 1 and 2. Test reference numbers: 06031/1-4.

PHYSICAL PROPERTIES AND ACCESSORIES

Fire properties: The surface barrier layer of Acoustilay 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 - 1200mm x 1200mm

	Thickness	Weight
Acoustilay 15	15mm	15Kg/m^2
Acoustilay 8	12mm	8Kg/m^2
Acoustilay 3	10mm	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.

Perimeter Strip - 1200mm long x 25mm wide

	Thickness
Acoustilay 8 strip	6mm
Acoustilay 15 strip	9mm

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

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

Acoustilay T&G MDF:
1200 x 1200 x 6mm
1200 x 600 x 9mm

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