

Advantages

- Tested to meet Document E (2003)
- Improves airborne sound insulation
- Reduces impact noise transmission
- Available in easy to handle tiles
- Flexible and easy to cut
- Simple to install
- Cost effective

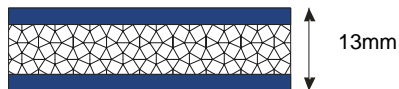
Applications

The Wilhams WAU acoustic underlay system is an excellent under-carpet and laminated wooden floor noise barrier reducing both airborne and impact noise for existing floors and is suitable for use in both commercial and residential applications, efficiently limiting the passage of noise through the floor. The Wilhams WAU acoustic underlay system is ideal for new, retrofit or renovation projects in offices, homes and hotel applications as it is so easy to fit.

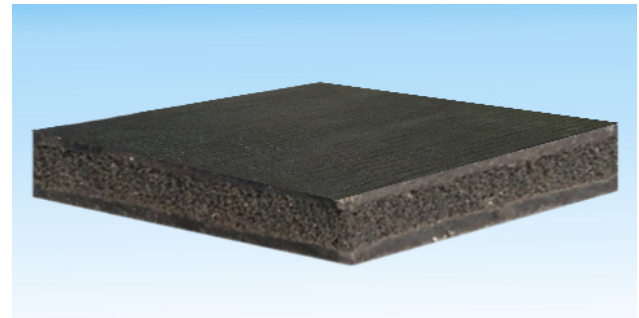
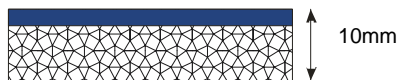
Description

Wilhams acoustic underlay is available in two formats, namely:-

WAU-1 Designed for timber floor applications that require additional airborne and impact noise insulation. This high performance composite is a sandwich laminate incorporating two layers of Wilhams WB075 acoustic barrier separated by a 6mm layer of Wilhams PUNF acoustic foam.



WAU-2 Designed for concrete floor applications that require mainly impact noise insulation and to a lesser extent airborne noise insulation. This composite is a two layer laminate the upper being Wilhams WB075 acoustic barrier supported by a 6mm layer of Wilhams PUNF acoustic foam.



Physical Information

DIMENSIONS

Standard sizes: 1950mm x 1150mm
1185mm x 985mm
Alternative sheet or tile sizes are available upon request.

WEIGHT

Type	Thickness (mm)	Weight (kg/m ²)
WAU-1	13	15
WAU-2	10	7.5

Technical Information

The WB acoustic barrier and PUNF acoustic foam are standard materials from within the Wilhams product range and are both fully proven acoustic products.

Wilhams PUNF acoustic foam is a fully tested fire resistant foam that achieves the fire resistance requirements of British Building Regulations BS476: Part 6 & 7, satisfying the highest level Class "O".

Additional information:

- Flammability (FMVSS 302) – self extinguishing
- ASTM 1692:1974 – resists ignition
- Service temperature - < 80°C (continuous)
<110°C (short periods)

Wilhams WB acoustic barrier material is a high-density mineral loaded thermoplastic polymer. Black in colour, ecologically neutral and recyclable, it conforms to the following specifications:

- Flammability (FMVSS 302) - Zero burn rate
- Service temperature - < 90°C (continuous)
<120°C (short periods)
- Shelf Life – Indefinitely in cool dark conditions

Wilhams Insulation Group

117 Bohemia Road, St Leonards-On-Sea, East Sussex TN37 6RL United Kingdom

Export Sales:- Tel: +44 (0) 1424 717171 Fax: +44 (0) 1424 20100 Email: sales@wilhams-insulation.co.uk

© Copyright 2005 Wilhams Insulation Limited.

Acoustic Performance

Wilhams WAU acoustic underlay has been acoustically tested at the Sound Research Laboratories Ltd. UK test facilities (test report C/04/5L/0980/2A) according to BS 2750:Part3:1995, BS EN ISO 143-3:1995 and BS EN ISO 140-6:1998, with a base floor construction of 18mm T&G chipboard screwed to 195 x 50mm joists. The joists, at 600mm centres, were supporting a ceiling of two 12.5mm plasterboards screwed to the joists. The following performance results were recorded:

Airborne Sound Insulation Data

-Approved Document E July 2003 Requirements

Airborne ($D_nT_w + C_{tr}$)	
Newbuild	45dB or greater
Refurbishment	43dB or greater

- Wilhams WAU laboratory test results

Airborne $R_w(C; C_{tr})$	dB
Base floor with WAU-1 acoustic underlay	49 (-1;-5)
Base floor with WAU-1 acoustic underlay (taped joints & perimeter)	50 (-1;-5)
Base floor with WAU-1 acoustic underlay, 6mm plywood and 6mm laminate wood floor finish	51 (-2;-5)
Base floor with WAU-1 acoustic underlay and 8mm carpet	50 (-2;-5)
Base floor with WAU-2 acoustic underlay	47 (-1;-4)

Impact Sound Insulation Data

Approved Document E July 2003 Requirements

Impact (L_nT_w)	
Newbuild	62 dB or less
Refurbishment	64 dB or less

- Wilhams WAU laboratory test results

Impact $L_{n,w}(C_i)$	dB
Base floor with WAU-1 acoustic underlay	50 (-2)
Base floor with WAU-1 acoustic underlay, 6mm plywood and 6mm laminate wood floor finish (taped perimeter)	62 (1)
Base floor with WAU-1 acoustic underlay and 8mm carpet	42 (0)
Base floor with WAU-2 acoustic underlay	49 (1)
Base floor with WAU-2 acoustic underlay and 8mm carpet	42 (1)

The impact sound improvement index for Wilhams WAU acoustic underlay on a concrete floor according to BS EN ISO 140-8:1998 was also undertaken at the Sound Research Laboratories Ltd. UK test facilities (test report C/04/5L/0980/3). The following performance results were recorded.

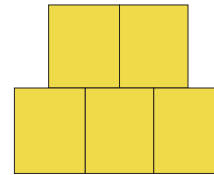
-Impact Sound Improvement index on concrete floors

Doc E (July 2003) Building Regulations (ΔL_w)	WAU-1	WAU-2
17 dB (minimum)	37 dB	37 dB

To enhance the acoustic performance of an installation, we suggest that a 100mm thick layer of 45 kg/m³ mineral wool is installed in between the joists.

Installation Guidelines

Wilhams WAU acoustic underlay is supplied in standard sheet / tile sizes. These are easy to lay onto the floor in a staggered pattern, placed tightly together.



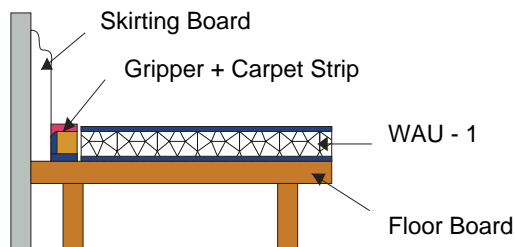
The WAU sheets / tiles can be laid loose or bonded to the floor. When bonding to the floor ensure that the surface is clean, dry and grease free, and that the flooring is secured before bonding. An acrylic solvent based adhesive is recommended. The WAU tiles can be pushed up to the skirting board or wall; ensure a tight fit to prevent flanking of airborne noise.

Wilhams Insulation Group

117 Bohemia Road, St Leonards-On-Sea, East Sussex TN37 6RL United Kingdom
 Export Sales:- Tel: +44 (0) 1424 717171 Fax: +44 (0) 1424 20100 Email: sales@wilhams-insulation.co.uk
 © Copyright 2005 Wilhams Insulation Limited.

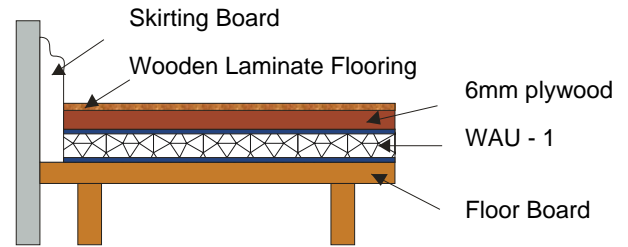
For Carpets

Wilhams WAU acoustic underlay is ideal for carpet applications and can be installed by using grippers or by bonding. Where grippers are used, Wilhams can supply gripper strips that are to be fitted to the perimeter of the room before laying the WAU tiles.

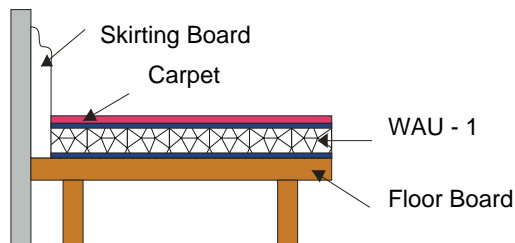


For Wooden Laminate Floors

Where a wooden laminated flooring surface is to be laid, it is recommended to bond a layer of 6mm plywood to the WAU first.

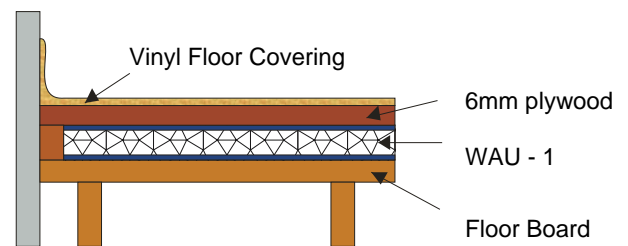


Alternatively when bonding the carpet to the WAU material, ensure the adhesive is suitable for polyurethane materials, as shrinkage may result. (it is recommended to bond the WAU tiles to the floor, when bonding with the carpet).



For Vinyl Floors

Where vinyl floor coverings are to be used, again it is recommended to protect the covering by first laying a boarding of 6mm plywood to the WAU material.



For other types of installations or applications, please contact our sales staff for recommendations and further information.

Recommended Adhesive

Wilhams recommend the use of a solvent based acrylic pressure sensitive adhesive. Application is by brush or roller and provides coverage at approximately 5m² per litre. Wilhams product code A6435.

Wilhams Insulation Group

117 Bohemia Road, St Leonards-On-Sea, East Sussex TN37 6RL United Kingdom

Export Sales:- Tel: +44 (0) 1424 717171 Fax: +44 (0) 1424 20100 Email: sales@wilhams-insulation.co.uk

© Copyright 2005 Wilhams Insulation Limited.