ACOUSTALAY®

Innovative underlay for rigid floors



THE UNDERLAY RANGE 2025









est. 1986 Engineering Underlay for rigid floors since 1995 "THE FIRST – THE BEST" THE FOUNDATION OF GREAT FLOORS

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OUR ADVERTISING













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ABOUT US / WHY ACOUSTALAY®?









Established in 1986 & proudly manufacturing in South Wales, **Beacons Products Ltd** is the leading stockist, distributor and converter of expanded foam products in Wales and the West Country.

The first company engineering underlay for rigid floors when laminates were first introduced in the UK and Ireland in the early 1990s, we developed **ACOUSTALAY®** to meet our customers' needs & industry standards exactly.



WHY ACOUSTALAY®?

Produced from a unique formula of physically cross-linked polyolefin foam **ACOUSTALAY®** provides premium quality underlay with "**Comfort Walk**" cushioning support & 100% recovery. Its exceptional all-round performance & competitive pricing makes **ACOUSTALAY®** the best & most cost-effective solution available to compliment and protect laminate, engineered or solid wood floors.

Fully tested & certified for domestic to heavy commercial applications, meeting industry standards exactly, with underlay developed for acoustically sensitive areas, use with underfloor heating & with vapour or DPM barriers, **ACOUSTALAY®** will meet the specific requirements of your installation.

With 30 years' experience ACOUSTALAY® has established itself as the professional's choice.



ABOUT US / WHY ACOUSTALAY®?

THE TWO KEY FUNCTIONS OF RIGID FLOORING UNDERLAY

All underlay must provide a minimum of 1.5mm layer between the floor to be laid and the sub-floor for spot levelling, preventing rocking & sound bridges.





ACOUSTALAY® is tested so when the appropriate grade is selected for the required application, compression is minimised with no more than 10% thickness loss over a guaranteed minimum period of 10 years when under load. This gives a minimum of 1.8mm protection between the floor to be laid and the sub-floor, ensuring spot levelling and all other benefits are maintained for the life of the floor.

LOADING RANGE

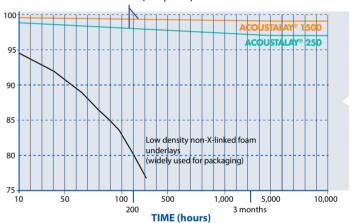
2.5-15kPa (250-1500kg/m²)

OVERLOAD COMPRESSION

When 20% compression is exceeded, cellular foams fail as the cell structure becomes damaged and can no longer recover its original thickness

Compressive creep comparison at 2kPa (200kg) load

ACOUSTALAY® will compress no more than 10% over the life of the floor (10 years)



2 All

All underlay must not deflect by more than 0.5mm to protect the joints from premature wear extending the life of the floor.



ACOUSTALAY® is fully tested and will take a force of a minimum of 20kPa = equivalent to 2 tonnes on the joint without exceeding the 0.5mm deflection limit, maintaining the integrity of the joints.

DEFLECTION RANGE

20-60kPa (2000-6000kg/m²)

IF THE UNDERLAY FAILS, THE FLOOR FAILS















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SELECTION GUIDE









SEE PAGES 8-9 FOR TECHNICAL OVERVIEW



^{*} Estimated values

TECHNICAL OVERVIEW



TYPICAL USE

ACOUSTALAY® for home, office & commercial applications. The range offers sound reducing & energy saving options & underlay ideally suited to high moisture areas, coarse surfaces, heavy loading & for use with underfloor heating.



THICKNESS - SPOT LEVELLING

Under load, all underlay must provide a minimum of 1.5mm insulating spot levelling between the floor and sub-floor & be thick & elastic enough to compensate for small protruding particles found on the smoothest

of floors. By doing so it extends the life of the floor preventing the creation of undesirable sound bridges and rocking which would otherwise be caused by the new floor contacting the sub-floor.

ACOUSTALAY® range: 1.8mm - 4.5mm spot levelling



LOADING PERFORMANCE - COMPRESSIVE CREEP

Compressive creep is measured (being equal to thickness loss over time under a specified load) according to EN 1606 and EN 13163.

The value given in kPa (Kg/m²) is the maximum load which can be applied to the underlay so that the loss in thickness remains below 10% after 10 years loading time.

The loading performance (compressive creep) of ACOUSTALAY® gives a minimum of 1.8mm protection between the floor and the sub-floor, ensuring spot levelling and all other benefits are maintained for the life of the floor.

This data is of particular importance in relation to heavy furniture. The higher the value the greater its ability to withstand heavy static loading of this kind.

ACOUSTALAY® range: 300Kg/m² - 1500Kg/m², domestic to heavy commercial (3kPa - 15kPa)



JOINT PROTECTION - COMPRESSIVE STRENGTH

Compressive strength is measured at 0.5mm deformation according to acc. ISO 844 resp. EN

A maximum deflection of 0.5mm to a minimum force of 20kPa is required to prevent potential

damage to the click or tongue and groove system when puncture load is applied.

The higher the value the greater its resistance to tongue and groove damage.

ACOUSTALAY® range: 20kPa - 60kPa (2000Kg/m² - 6000Kg/m²) without exceeding the 0.5mm deflection limit



FIRE RETARDANT FOAM

Tested to UL94, rating H-BF, HF-2, HF-1. Slow horizontal burning on a 3mm thick specimen with a burning rate less than 75mm/min or stops burning

before the 125mm mark. H-B rated materials are considered "self-extinguishing".

VAPOUR BARRIER (MOISTURE)

Moisture content of all mineral sub-floors (cement, screed floor, ceramic and stone tiling) can vary and needs to be ascertained.

European Producers of Laminate Flooring (EPLF) Code of Practice for the installation of laminate flooring recommends the Magnesium moisture test (CM) for measuring relative humidity.

A maximum moisture content within a cement screed sub-floor must be kept to <2.0CM% with a relative humidity not exceeding 60% RH.

To protect floors and to minimise the risk of damage from rising damp with sub-floor moisture level:

- between 2 & 4% use **ACOUSTALAY®** or a separate vapour barrier to EN 13984
- >4% use ACOUSTALAY® DPM or ENERGY or a separate Damp Proof Membrane (DPM) to EN 13967

in either case use waterproof joint sealing tape.



Separate barriers where applied meet the following standards:





THERMAL INSULATION - RESISTANCE

Thermal resistance is measured according to ISO 11902:BS EN 31092 and is relevant if either underfloor heating is in use, or if heat loss is an issue.

With sub-floor embedded underfloor heating the ACOUSTALAY® will lie on top of the heated subfloor. According to EN 1264 Part 3 Floor Heating - System & Components, the thermal resistance Rλ, B of all materials (underlay, laminate, wood etc.) laying on top of the heated floor should not exceed 0.150m²K/W to prevent unnecessary increase of the flow temperature of the heating system. Hence in this

case the lower the value of the ACOUSTALAY® the areater the flexibility in the choice of flooring.

In the case of surface underfloor heating (ribbon or wire type) the ACOUSTALAY® will lie between the sub-floor and the heating system. In this case, with the ACOUSTALAY® below the heating system, it will not offer an impediment to heat travelling upwards into the room. Instead it will provide an insulating layer against heat loss through the sub-floor which it will also provide where underfloor heating is not in use. In either case a high thermal insulation value will



INDERFLOOR HEATING



ACOUSTALAY® range: 0.052m2K/W - 0.15m2K/W

IN-ROOM SOUND QUALITY (DRUM)

Drum sound (also called room, emitted or reflected sound) is defined as a perceived level of noise inside a room created by footsteps, falling toys and other impact sources.

The internal test methods adopted relate to the EPLF norm 021029-3. Within the ACOUSTALAY® range the higher the rating (four star being the highest) the better the perceived noise within the room.



TRANSMITTED SOUND REDUCTION (IMPACT)

Impact sound transmission of laminate flooring is measured according to ISO 140-8 using a tapping hammer on the floor.

Results are expressed as a single value called impact sound improvement index D Lw (dB) which basically describes the noise level in an underneath located room once with and once without the floating floor.

The higher the value the lower the noise level in the room underneath the floor.

Note: A reduction of the noise level by 10dB corresponds to a 50% reduction of the perceived loudness to the human ear.



ACOUSTALAY® range: 16dB - 22dB

0725/BEA086

FOR USE WITH FLOATING LAMINATE OR ENGINEERED FLOORS

- On timber or concrete-based sub-floors with moisture level below 2% volume
- On concrete-based sub-floors with moisture level between 2% & 4%
- 1 Ensure the sub-floor is clean and flat*. To assist laying, apply double-sided tape to the perimeter of the sub-floor and tape the joints between each row.
- 2 If laid on a timber based sub-floor or concrete-based sub-floor with moisture level below 2% simply unroll on to a prepared sub-floor, at 90° to the direction of the floor, covering area to be laid. Butt tightly together edge to edge. Do not overlap the **ACOUSTALAY®**.

If laid on a concrete sub-floor with moisture level between 2% & 4% so the ACOUSTALAY® is to be used as a vapour barrier then the first row should be laid with a minimum 20mm up the walls. All rows, including the last, should be laid with a minimum 20mm up the wall. Carefully tape the joints between each row using waterproof tape.

3 Lay the flooring on top of the ACOUSTALAY®, referring to the manufacturer's instructions.

Any surplus **ACOUSTALAY®** can be trimmed flush to the floor when installation is complete and will be concealed behind the new or refitted skirting, scotia/trim.

Suitable for use with underfloor heating.



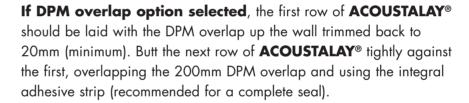




FOR USE WITH FLOATING LAMINATE OR ENGINEERED FLOORS

• For areas with high sub-floor moisture level (above 4%)

- 1 Ensure the sub-floor is clean and flat*. To assist laying, apply doublesided tape to the perimeter of the sub-floor & tape the joints between each row
- 2 If laid on a concrete sub-floor with sub-floor moisture level above 4% so the ACOUSTALAY® is to be used as a damp proof membrane, simply unroll on to a prepared sub-floor, at 90° to the direction of the floor, covering area to be laid. The first row should be laid with a minimum 20mm up the walls. Butt tightly together edge to edge. Do not overlap the ACOUSTALAY®. All rows, including the last, should be laid with a minimum 20mm up the wall. Carefully tape the joints between each row using waterproof tape.



All rows, including the last, should be laid with a minimum 20mm up the wall§

3 Lay the flooring on top of the ACOUSTALAY®, referring to the manufacturer's instructions.

Any surplus **ACOUSTALAY®** can be trimmed flush to the floor when installation is complete and will be concealed behind the new or refitted skirting, scotia/trim.

Suitable for use with underfloor heating.









- * A flat sub-floor means deviations of less than 2mm over 2.5m.
- Acoustalay® is combustible and should not be exposed to flame or other sources of ignition.









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ADHESIVE INSTALLATION GUIDE

FOR USE WITH ENGINEERED OR SOLID WOOD FLOORS

• On a concrete-based sub-floor, with moisture level below 2.5% volume

Pre-cut slots ensure the floor is fixed directly to the subfloor using minimum high strength, elastic adhesive.

- 1 Ensure the sub-floor is clean and flat*. To assist laying, apply double-sided tape to the perimeter of the subfloor and tape the joints between each row.
 - Simply unroll on to a prepared sub-floor, with the pre-cut slots perpendicular to the length of the wood, covering area to be laid. Butt tightly together edge to edge. Do not overlap the ACOUSTALAY®.
- 2 Apply high strength elastic adhesive at a width of 8mm and a height of 8mm to all the pre-cut slots to form a secure bond between wood boards and sub-floor. The nozzle should be held vertically to the substrate.
- 3 Remember to leave expansion gaps in accordance with floor-fitting instructions. It is important that the first row is laid completely straight (do not assume the wall is straight). Start laying flooring on top of the ACOUSTALAY®, along the longest wall. Position wood boards carefully and firmly and press into the adhesive until they lay taut to the previous row. The wood boards can then be positioned using a hammer and an impact block Continue until the floor area is covered

This system is designed for accurately cut 'tongue and groove' boards (min: 3x3mm) with a minimum board size of 300x50x12mm and a maximum board thickness of 28mm.









CAUTION:

- * A flat sub-floor means deviations of less than 2mm over 2.5m.
- Acoustalay® is combustible and should not be exposed to flame or other sources of ignition.









FOR USE WITH ENGINEERED OR SOLID WOOD FLOORS

- On timber or concrete-based sub-floors with moisture level below 2.5% volume
- On concrete-based sub-floors with moisture level between 2.5% & 4% when a separate vapour barrier should be used

Once contact is made between the adhesive upper surface of the ACOUSTALAY® and the floor they are bonded together, with both then floating over (not fixed to) the sub-floor. The floor can be walked on & worked on immediately after installation.

- 1 Ensure the sub-floor is clean and flat*. To assist laying, apply double-sided tape to the perimeter of the sub-floor.
- Each row of ACOUSTALAY® should be measured to allow one or two board widths plus 100mm extra length up the wall at the leading edge.
- 2 If laid on a timber based sub-floor or concrete-based sub-floor with moisture level **below 2.5%** simply unroll on to a prepared sub-floor, at 90° to the direction of the floor, with the release liner facing upwards, covering area to be laid. Butt tightly together edge to edge. Do not overlap the ACOUSTALAY®.
 - If laid on a concrete sub-floor with moisture level between 2.5% & 4% a separate vapour barrier will be required before the ACOUSTALAY® is laid, this should be positioned with a minimum of 20mm up all room edges. To assist laying apply double-sided tape to the perimeter of the sub-floor.
- 3 Peel back the release liner from the adhesive on the extra length measured at the leading edge of all rows of **ACOUSTALAY®** (mentioned in point 1 above)

Leaving the liner intact, trim the underlay only flush to the room edge.

- 4 Replace the liner to cover all exposed adhesive to ensure no contact is made with the flooring before
- NB: As spare liner becomes available during the installation it can be re-applied to any off-cut pieces of foam, which can be retained for later use.
- 5 Fold the extra length of liner down onto the newly trimmed rows (without exposing the adhesive), giving a double layer of liner onto which the first row of boards can be laid
- 6 Remember to leave expansion gaps in accordance with floor-fitting instructions. It is important that the first row is laid completely straight (do not assume the wall is straight).
- Carefully position the first row of boards. For engineered flooring add a couple of spots of wood glue to the board ends (optional) because of light expansion – not necessary for solid wood flooring.
- 7 Once the first row is positioned, a portion of the liner will still be visible. Grip this and gently pull back from under the boards, while retaining pressure on the flooring to keep it in place.

CAUTION: ONCE THE FLOOR CONTACTS THE ADHESIVE IT WILL NOT BE POSSIBLE TO **RE-ADJUST ITS POSITION.**

- 8 For ease of installation ensure that the release liner remains underneath the last fitted row. If pulled too far at any stage, simply press carefully back into place so that no adhesive is exposed.
- 9 Install further rows by laying the flooring on top of the folded liner and, once in position, pull back the liner from the ACOUSTALAY® row by row.
- Any surplus/exposed vapour barrier can be trimmed flush to the floor when installation is complete and will be concealed behind the new or refitted skirting, scotia/trim.
- Suitable for use with sub-floor embedded underfloor heating.





- * A flat sub-floor means deviations of less than 2mm over 2.5m.
- Minimum installation & storage temperature 10°C.
- Acoustalay® is combustible and should not be exposed to flame or other sources of ignition.









SALES SUPPORT

SUPPLY FLEXIBILITY ON TIME! IN FULL! HASSLE FREE!

Rapid, reliable service direct to you from large stock at our South Wales factory.

Carefully made & individually inspected. We care about your order and how you receive it, supplying palletised, bagged retail or contractor rolls for easy handling & maximum resale value.



Top Up trays (Retail Rolls)



Retail (POS) **Display Cartons**

ACOUSTALAY® SAMPLES



CONTACT OUR CUSTOMER SERVICE TEAM TODAY & RECEIVE A FREE SAMPLE PACK

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