

# TECHNICAL OVERVIEW

## TYPICAL USE



HOME, OFFICE, FACTORY

## INTRODUCTION

For home, office or commercial applications, we offer a range of solutions.

## THICKNESS



(PROTECTION)

## THICKNESS - SPOT LEVELLING

Underlay needs to be thick and elastic enough to compensate for small protruding particles found on the smoothest of floors. Thereby preventing the creation of undesirable sound bridges and rocking caused by the new floor coming into contact with the sub-floor.

A minimum of 1.5mm thickness is recommended for moderately smooth structural floors, Beacons recommend a minimum of 1.8mm for normal use.

*When applied correctly the **ACOUSTALAY®** range achieves a minimum of 1.8mm protection for the life of the floor.*

## PERFORMANCE



## PERFORMANCE - COMPRESSIVE CREEP

Compressive creep is measured (being equal to thickness loss over time under a specified load) according to EN1606 and EN13163.

10% after 10 years loading time. This data is of particular importance in relation to heavy furniture.

The value given in kPa is the maximum load which can be applied to the underlay so that the loss in thickness remains below

The higher the value the greater its ability to withstand heavy furniture.

**ACOUSTALAY®** range: 2kPa - 35kPa (200Kg/m<sup>2</sup> - 3500Kg/m<sup>2</sup>)

## JOINT PROTECTION



## JOINT PROTECTION - COMPRESSIVE STRENGTH

Compressive strength is measured at 0.5mm deformation according to acc. ISO 844 resp. EN13163.

prevent potential damage of the click or tongue and groove systems when puncture load is applied. The higher the value the greater its resistance to tongue and groove damage.

A minimum value of 20kPa is advisable to

**ACOUSTALAY®** range: 28kPa - 110kPa (2800Kg/m<sup>2</sup> - 11000Kg/m<sup>2</sup>)

## 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 foot-steps, 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.

### IN-ROOM SOUND QUALITY (DRUM)



## TRANSMITTED SOUND REDUCTION (IMPACT)

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

which basically describes the noise level in an underneath located room once with and once without the floating floor.

Results are expressed as a single value called impact sound improvement index D Lw (dB)

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

**ACOUSTALAY**® range: 16dB upwards

### TRANSMITTED SOUND REDUCTION (IMPACT)



## THERMAL INSULATION - RESISTANCE

Thermal resistance is measured according to ISO 8301 at 10°C mean temperature and is relevant if either under floor heating is in use, or if heat loss is an issue.

value of the **ACOUSTALAY**® the greater the flexibility in the choice of flooring.

With sub-floor embedded under floor heating the **ACOUSTALAY**® will lie on top of the heated floor. According to EN1264 Part 3 Floor Heating – System & Components, the thermal resistance R<sub>p</sub>, B of all materials (underlay, laminate, carpet etc.) laying on top of a heated floor should not exceed 0.150m<sup>2</sup>K/W to prevent unnecessary increase of the flow temperature of the heating system. Hence in this case the lower the

In the case of surface under floor 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 provide an insulating layer against heat loss through the sub-floor and will not offer an impediment to heat travelling upwards into the room. Similarly where under floor heating is not in use the **ACOUSTALAY**® will provide an insulating layer against heat loss through the sub-floor. In either case a high thermal insulation value will be beneficial.

**ACOUSTALAY**® range: 0.05m<sup>2</sup>K/W - 0.15m<sup>2</sup>K/W

### THERMAL INSULATION



### UNDERFLOOR HEATING



## VAPOUR BARRIER (MOISTURE)

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

vapour barrier with waterproof jointing tape.

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

**ACOUSTALAY**® products are tested to ISO 1663 (23°C @ 0.50% RH) for moisture barrier performance. The EPLF code of practice requires a minimum thickness of 0.2mm of PE foil which equates to an SD Value (M) of 20.

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

All **ACOUSTALAY**® products with an SD value of 20 or greater pass the EPLF requirements eliminating the need for additional barriers.

To protect floors and to minimise the risk of possible damage from rising damp use only **ACOUSTALAY**® products with an integrated

For areas where sub-floor moisture level is >4% a damp proof membrane (DPM) should be used.

### VAPOUR BARRIER (MOISTURE)



**CAUTION:** **ACOUSTALAY**® is combustible and should not be exposed to flame or other sources of ignition.