

# Amorim ECO21dB

LVT underlay



Produced from Recycled and Natural Materials  
Impact Noise Reduction and  
Thermal Insulation Properties  
High Durability and Long Term Resilience  
High Performance with Reduced Thickness  
Tested according to MMFA requirements Group 1+2



## PRODUCT DESCRIPTION

Resilient layer for installation immediately below floor finish, consisting of an agglomerated cork and recycled EVA with PU elastomer bonding agent.



## PHYSICAL AND MECHANICAL PROPERTIES

Specific Weight <sup>(1)</sup>	Tensile Strength <sup>(1)</sup>	Compression at 0,7MPa <sup>(1)</sup>	Recovery after 0,7MPa <sup>(1)</sup>
600 - 700 Kg/m <sup>3</sup>	> 500 KPa	15%	> 65%

<sup>(1)</sup>ISO 7322



## THERMAL INSULATION

Thermal Conductivity <sup>(1)</sup>	Thermal Resistance	Tog Rating
0,1036W/mK	0,015m <sup>(2)</sup> K/W	0,15

<sup>(1)</sup>EN 8301



## ACOUSTIC RESULTS

Flooring	Thickness (mm)	$\Delta L_w$ (dB) <sup>(1)</sup>
LVT	1,6	21 dB

<sup>(1)</sup>ISO 10140-3 and ISO 717-2



## STANDARD DIMENSIONS

Thickness (mm)	1,6
Width (m) x Length (m)	1 x 15

Others sizes available upon request





## PROTECTION AGAINST LOADS AND USAGE

Dynamic Load (DL) <sup>(1)</sup>	Compressive Strength (CS) <sup>(2)</sup>	Compressive Creep (CC) <sup>(3)</sup>	Residual Indentation <sup>(4)</sup>
≥ 10.000 cycles	≥ 200 KPa	≥ 10 KPa	≤ 0,2 mm

<sup>(1)</sup> EN 13793 <sup>(2)</sup> EN 826 <sup>(3)</sup> EN 1606 <sup>(4)</sup> ISO 24343-1



## WATER VAPOR DIFFUSION RESISTANCE (SD)

>75 m

Achieved with an additional water vapour control layer (PE foil) EN 12086 Method A



## PUNCTUAL CONFORMABILITY (PC)

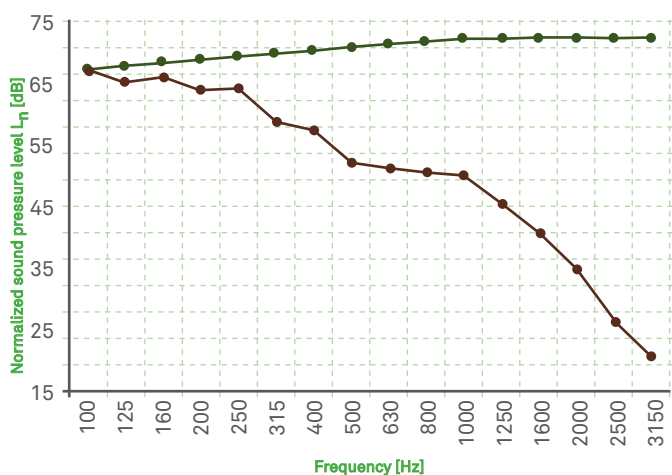
≥0,5 mm<sup>(1)</sup>

<sup>(1)</sup> ISO 868



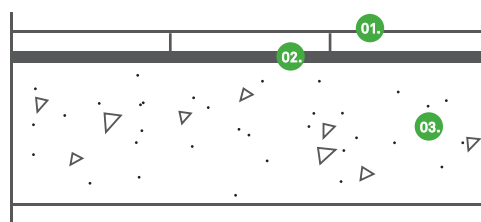
## ACOUSTIC RESULTS

Test procedure according to ISO 10140-1:2010; ISO 10140-3:2010; ISO 10140-4:2010 and ISO 717-2:2013 standards.



—●— L<sub>n,r,0</sub> (dB)  
—●— L<sub>n,r,w</sub> (dB) - 1,6 mm + LVT

## TEST APPARATUS (ΔL<sub>w</sub> & IIC)



01.

Floor covering composed by loose-lay or click system LVT

02.

Agglomerated cork and recycled EVA resilient layer - Amorim ECO21dB

03.

Reinforced concrete slab of thickness 140mm

L<sub>n,r</sub> - Normalized impact sound pressure level of the reference floor with the floor covering under test;  
L<sub>n,r,0</sub> - Normalized impact sound pressure level of the Lab reference floor;  
ΔL<sub>w</sub> - Impact sound pressure level reduction index of the covering under test, on a normalized floor;

Ref. Test Report	Thickness	Flooring	L <sub>n,r,w</sub> (C <sub>i,r</sub> )	ΔL <sub>w</sub> (C <sub>i,Δ</sub> )
ACL 047/17	1,6 mm	Hydrocork (6 mm)	57(1) dB	21(-12) dB



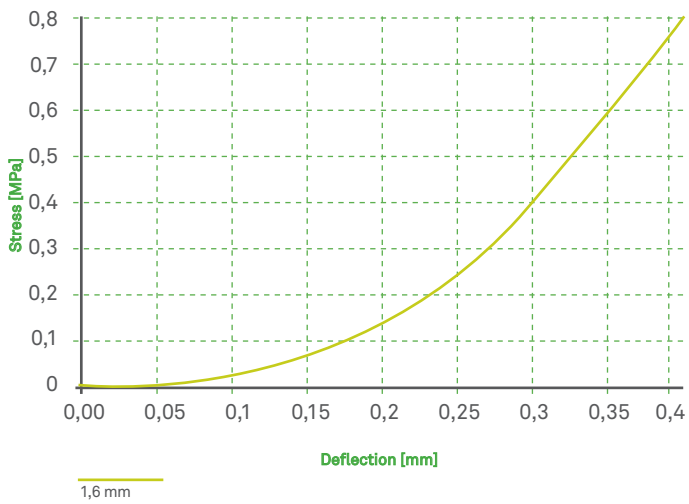
## PHYSICAL AND MECHANICAL PROPERTIES

### DYNAMIC STIFFNESS

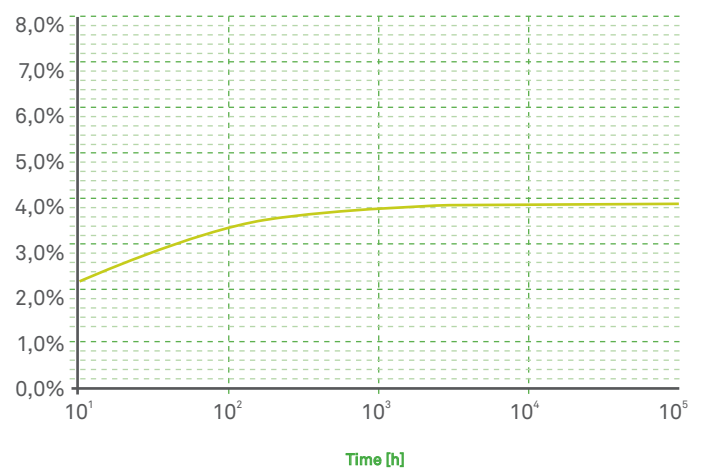
Test procedure according to ISO 9052-1 and ISO 7626-5 standards.

Thickness (mm)	Dynamic Stiffness (MN/m <sup>3</sup> )
1,6	134

## LOAD DEFLECTION



## CREEP DEFLECTION @ 0,0045MPa (% OF START HEIGHT)

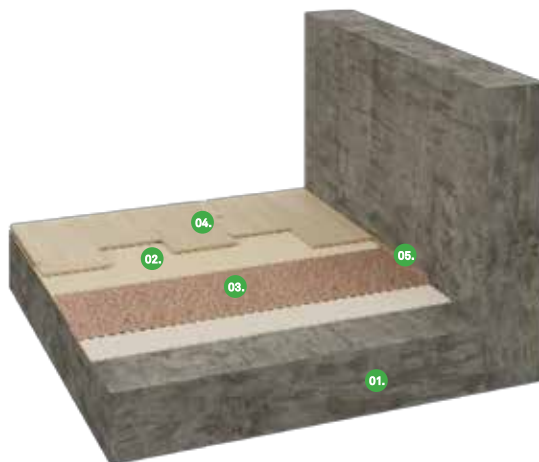


Note: Following ISO8013-1998 measured in Cantilever Test System

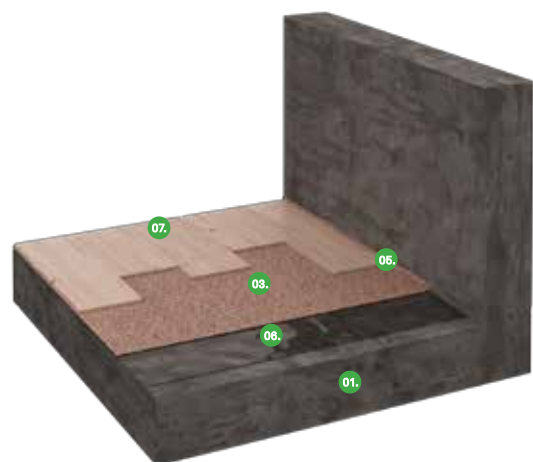


## INSTALLATION

### STICK DOWN FLOORS



### FLOATING FLOORS



01.

Reinforced concrete slab

02.

Adhesive

03.

Agglomerated cork and recycled EVA resilient layer - Amorim ECO21dB

04.

Floor covering composed of glued LVT

05.

Perimeter insulation barrier

06.

Floating floors

07.

Floor covering composed of a non glued LVT

## General Installation Instructions

Before installation make sure that all rolls are as per your order and that there has been no damage in transit, obviously let us know straight away if there are any issues. It is important to allow the product to acclimatize to room temperature for a minimum of 24 hours, the room temperature should be at least 18°C and the relative humidity should not exceed 75%. The Amorim **ECO21dB** underlay should be loose laid in the installation area and cut at least 50mm over the required length and allowed to relax. During the installation period the room temperature should ideally be at least 18°C.

In general the working practices should be as described below and conform with the code of good practices.

Please also refer to the specific instructions of the manufacturer of the finished floor and (when applicable) the manufacturer of the adhesive.

## Air tightness

Air tightness is one of the keys to effective sound insulation. Sound is carried in the air and sound will leak through any gaps or holes in an installation. So it is very important that all gaps and holes between floors and also floors and walls are filled and properly sealed, this can be done using proprietary gap filling products and sealants. Ensure that all products used are suitable for the specific installation and if in doubt seek the advice of the manufacturer of the sealant or gap filler.

## Perimeter Isolation/Flanking

Another common problem which affects the acoustic performance of a floor is flanking. Flanking occurs when sound bypasses the main separating elements of the construction and finds acoustically weak paths. Ideally flanking sound paths formed by the junctions between separating wall and floor constructions will have been treated in the subfloor and wall construction, thereby isolating the individual elements. However, where noise has become a problem it may be that the correct flanking treatment for the building has not been followed. With this in mind, and for best acoustic results it may be necessary to install a perimeter isolation strip to minimize any potential flanking to the other parts of the building structure (Amorim **ECO21dB** can be turned up the wall if perimeter isolation strips are not available), this includes walls and columns as well as exposed pipes, ducting or any other component protruding from the floor.

When the flooring application is completed, the exceeding part of the perimeter isolation strip must be cut.

If flanking is thought to be a specific problem it may be necessary to seek further specialist acoustic advice.

## Sub Floor conditions and Floor Preparation

In general sub floor conditions should comply with the requirements of the code of good practices and specific instructions from the manufacturer of the finished floor.

Basically, this means that all sub floors should be clean, dry, level and structurally sound and free from any cracks and contamination. All cracks and holes should be adequately repaired to ensure a smooth finished appearance, patching and levelling compounds must be suitable for the end use application and must be compatible with the adhesives to be used (when applicable). The moisture content

of the subfloor should not be more than 2.5% (CM) by weight measured on concrete subfloors.

Vapour Insulation Barrier (only for Non Glued LVT)

PE (Polyethylene) vapour insulation barrier covering the entire flooring area, minimum 50mm wide vertically around the perimeter of the entire floor MUST be installed prior to Amorim **ECO21dB**.

Install by overlapping (minimum 100mm) the PE foil, and use an adequate tape to adhere/fix it, if necessary. After completion, PE foil should cover the entire concrete area without gaps. Never mechanically fasten the PE foil barrier with screws, nails or staples as this will severely diminish the performance of the insulation barrier.

## Installation – General

Amorim **ECO21dB** must be bonded to the subfloor. It is not essential to commence installation in the centre of the room, it is generally more practical to commence along the longest wall running the rolls in parallel. Wherever possible the product should be installed at 90° to the finished floor so that the chance of coinciding joints is minimized. The Amorim **ECO21dB** should be dry laid into workable areas and cut at least 50mm over the length required and allowed to relax for the acclimatization period as advised above. The product should then be cut using a straight edge utility knife and a gap of around 3mm should be left around the perimeter to allow for any expansion. The Amorim **ECO21dB** should not be in direct contact with any wall, column or skirting board that has not been isolated using a perimeter isolation strip. It should be adhered to the subfloor using a recommended adhesive (please refer to the latest list of recommended adhesives) strictly in accordance with the installation instructions of the adhesive manufacturer. It is particularly important to refer to the adhesive manufacturer's advice in respect of trowel sizes, application rates/coverage and open times. Only spread enough adhesive to cover a workable area, and after the required open time lay the Amorim **ECO21dB** into the adhesive and smooth out from the centre using a carpet glider or hand roller to ensure that the product is fully into the adhesive and all air bubbles are released. The Amorim **Eco21dB** should then be fully rolled into the adhesive using a 68kg articulated flooring roller to ensure full adhesion along the entire length and width of the product. All edges should be butt jointed ensuring that all seams and joints are smooth without any voids but not too tight.

## Final Flooring

Always follow the manufacturer's recommended installation instructions.

## Recommended Adhesives:

LVT to Amorim **ECO21dB**: Water-Based Emulsion/Synthetic Resin Glue  
Amorim **ECO21dB** to slab/screed: Water-Based Emulsion/Acrylic Adhesives

## Important Notes

Never mechanically fasten the Amorim **ECO21dB** to the flooring floor as this will severely diminish its acoustical value.



The data provided in this Material Data Sheet represents typical values. This information is not intended to be used as a purchasing specification and does not imply suitability for use in a specific application. Failure to select the proper product may result in either equipments damage or personal injury. Please contact Amorim Cork Composites regarding specific application recommendations. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Composites is not liable for any indirect special, incidental, consequential, or punitive damages as a result of using the information listed in this MDS. Any of its material specification sheets, its products or any future use or re-use of them by any person or entity. For contractual purposes, please request our Product Specifications Sheet (PDA).

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