



Underlay FUSION ENDURANCE

UNDERLAY FOR THERMAL
AND ACOUSTIC INSULATION



TECHNICAL PROPERTIES



★★★★★
Reduction
of impact noise



★★★★☆
Reduction
of footfall noise



★★★★★
Thermal
resistance



★★★★★
Compensates
for uneven floor



★★★★☆
Protection
from damage
from falling objects



★★★★★
Load
resistance



★★★★★
ANTISLIP

Material Description & Properties

Agglomerated Cork & recycled HD EVA underlay for impact noise and thermal insulation.

KEY FEATURES

- Excellent acoustic insulation.
- Good load absorption capacity.
- Produced from recycled and natural raw materials.
- Anti-slip underlay.
- Tested according to MMFA/EPLF higher requirements group 1 and 2.

TECHNICAL DATA

TEST	REQUIREMENT	UNIT	RESULT
Punctual conformability (PC)	≥ 0,5	mm	1,2
Compressive strenght (CS)	≥ 400	kPa	550
Compressive creep (CC)	≥ 35	kPa	50
Impact sound (IS)	≥ 18	dB	20
Reflected walking sound (RWS)	–	%	TBD
Thermal Resistance (R)*	≤ 0,15	m ² C/W	0,033
Dynamic load (DL)	≥ 100 000	cycles	≥ 100 000

* Suitable for underfloor heating and cooling

THERMAL INSULATION

Thermal Conductivity ⁽¹⁾	0,0544 W/mK
Thermal Resistance	0,0325 (m ² °C/W)

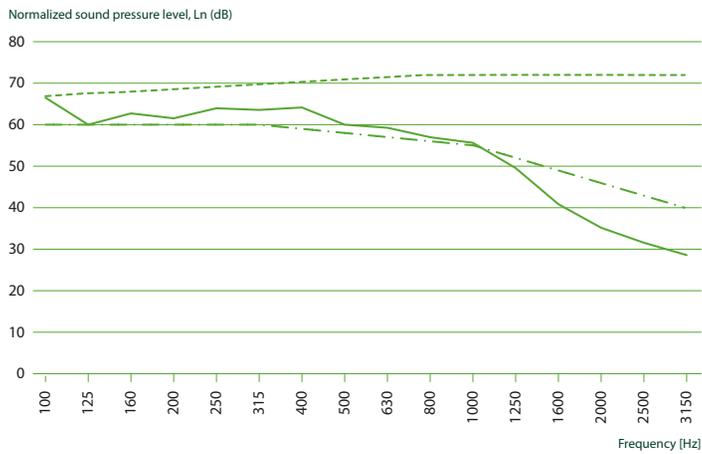
⁽¹⁾ EN 8301

ACOUSTICAL RESULTS

Flooring	Laminate floor
Thickness (mm)	2
ΔL_w (dB) ⁽¹⁾	20

⁽¹⁾ ISO 10140-3 and ISO 717-2

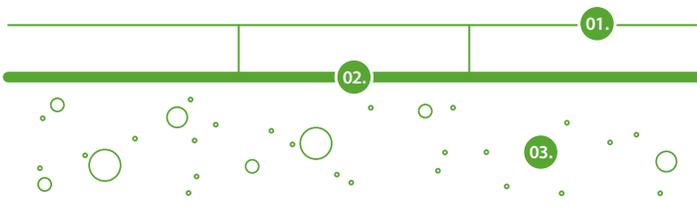
REDUCTION OF IMPACT NOISE



- $L_{n,r,0}$ – Normalized impact sound pressure level of the Lab reference floor.
- $L_{n,r}$ – Normalized impact sound pressure level of the reference floor with the floor covering under test.
- ΔL_w – Impact sound pressure level reduction index of the covering under test, on a normalized floor.

The results are based on test made with an artificial source under laboratory conditions (engineering method).

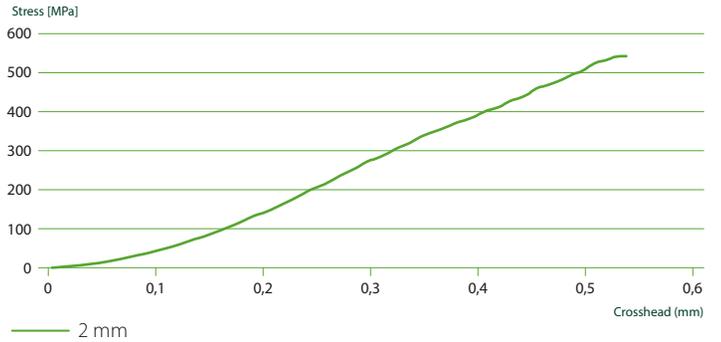
TEST APPARATUS (ΔL_w)



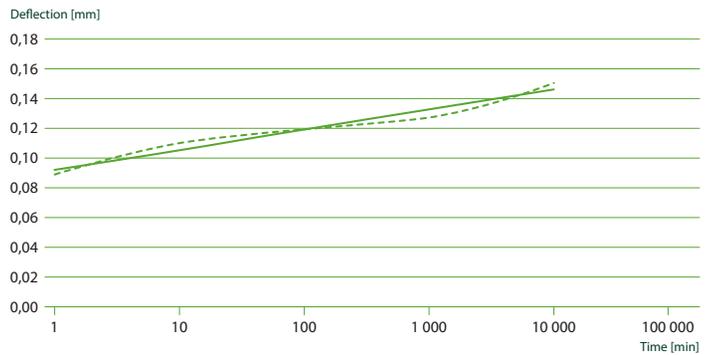
- 01. Laminate floor
- 02. Underlay GO4CORK FUSION (2 mm)
- 03. Concrete slab with 140 mm thickness

PHYSICAL AND MECHANICAL PROPERTIES

COMPRESSIVE STRENGTH

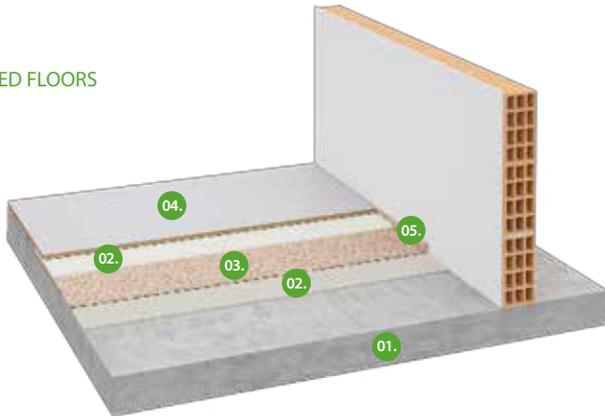


CREEP DEFLECTION @ 50 kPa (% OF START HEIGHT)

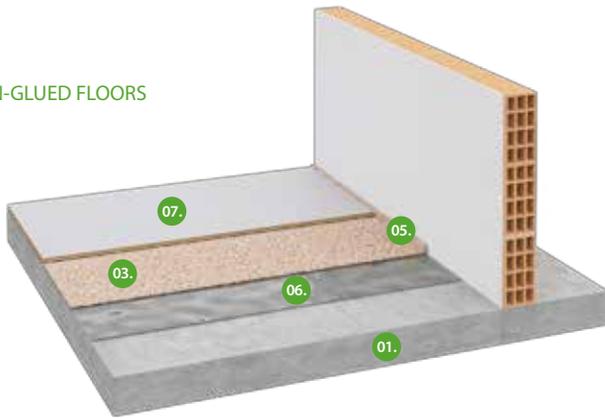


APPLICATION SCHEMES

GLUED FLOORS



NON-GLUED FLOORS



- | | | | |
|--------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------|
| <p>01.
Reinforced
concrete slab</p> | <p>02.
Adhesive</p> | <p>03.
Underlay
GO4CORK FUSION</p> | |
| <p>04.
Floor covering
composed of
glued LVT</p> | <p>05.
Perimeter
insulation barrier</p> | <p>06.
Vapour
barrier</p> | <p>07.
Floor covering
composed of
a non glued LVT</p> |

NEGATIVE CARBON BALANCE

Underlay Fusion 5166 has a negative carbon balance of -14,2 kg CO₂/m²*, when considering the CO₂ sequestration of the cork oak forest and the CO₂ emissions associated with the industrial process.



Has a carbon footprint **20x lower** than a standard synthetic foam underlay.

Requires **20x less resources' consumption** than a standard synthetic foam underlay.

* According to EY Underlay 5166 Footprint Analysis, 2020

GENERAL INSTALLATION INSTRUCTIONS

GENERAL INSTALLATION INSTRUCTIONS (WITH AND WITHOUT GLUE)

The following installation instructions are recommended by Amorim Cork Composites, and are not intended to be a definitive project specification. They should be interpreted and applied taking into account the recommendations of the manufacturers of the flooring to be installed, as well as the manufactures of the glue, should this be necessary.

1. PREPARATION OF THE SUBFLOOR

- The subfloor must be level, dry, clean and in good structural conditions. A floor is considered level if the deviation height is less than 2mm over a distance of 2.5 linear meters. Deviations above this value must be leveled out before underlay installation.
- The humidity content of the concrete substrate must not exceed 2.5 % (MC) by weight. Any moisture problems need to be solved before installation. New concrete slabs need to cure for at least 120 days before installation.
- The environmental conditions during the installation should be: temperature >10°C and humidity <75%

2. INSTALLATION OF THE MOISTURE BARRIER

For floating floors you must first install a moisture barrier across the entire area of the room to minimize the risk of possible damage caused by rising damp, and then install the underlay. The barrier must be installed directly onto the surface of the subfloor, in the opposite direction you plan to install the final floor to reduce seams. This moisture barrier should have a minimum sd-value of 75 m. It should be installed following the outline of the enclosing wall, to a height of at least 30 mm and with a minimum overlap of 100mm using a suitable tape to seal seams. After finishing, the barrier must cover the entire subfloor area without any gaps. Never mechanically secure the barrier with screws, nails or staples as this may compromise its effectiveness.

3. INSTALLATION OF THE UNDERLAY

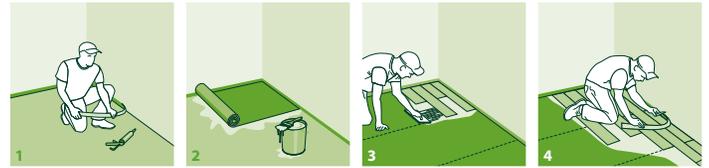
Place one roll of the underlay parallel to the wall and in the opposite direction you plan to install the final floor to reduce seams. Cut the underlay material roll to the desired length and install it directly, covering the entire surface of the room. The underlay must cover the entire area without any gaps, and be securely joined using duct tape. Never mechanically secure the underlay with screws, nails or staples as this may compromise its effectiveness. Install the flooring perpendicularly to the underlay. Always follow the flooring manufacturer's recommended installation instructions.

4. GLUED DOWN INSTALLATION

Before installing the underlay, apply the glue and make sure that the surface has been treated to prevent moisture. the installation of a moisture barrier is not necessary. After applying the glue, cut the underlay material roll to the desired length and install it directly, covering the entire surface. The underlay must cover the entire area without any gaps, and be securely joined using duct tape. Never mechanically secure the underlay with screws, nails or staples as this may compromise its effectiveness. Apply glue on the underlay and install the flooring perpendicularly to the underlay. Always follow the flooring manufacturer's recommended installation instructions.

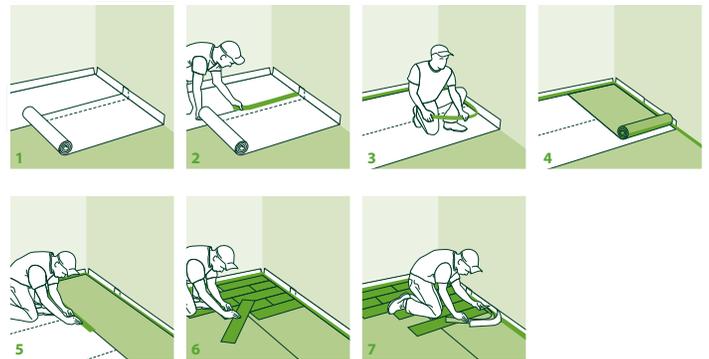
APPLICATION PROCESS

GLUED DOWN INSTALLATION



1. Installation of perimeter barrier;
2. Installation of underlay (glued);
3. Installation of final flooring (glued);
4. Cutting perimeter barrier.

FLOATING INSTALLATION



1. Installation of the moisture barrier;
2. Installation of the tape on the seams ;
3. Installation of perimeter barrier;
4. Installation of underlay;
5. Installation of the tape on joints between rolls;
6. Installation of final flooring;
7. Cutting perimeter barrier.



**AMORIM
CORK
COMPOSITES**

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