

AMORIM
CORK
COMPOSITES

Cork. Naturally Durable.

The best in class underlayment

for **LONG-TERM DURABILITY**

Report



Cork vs foam underlayments

Installing a cork underlayment is the best option to ensure your floors' durability while improving buildings' comfort and efficiency.

The visual and design component is one of the most valued aspects when it comes to floor installations or renovation projects. However, it is important to bear in mind the base on which the new flooring will lay, the underlayment.

This layer of material, applied between the concrete (or the previous flooring, in case of renovation work) and the final flooring, is essential to ensure the durability of the floor over time.

Durability: a key point when choosing an underlayment

To better understand customer needs, we gathered the opinion of more than 300 people who planned to install or had recently installed a new floor in their home. According to the results, **consumers who chose to install underlayments stated that their most valued performance characteristic is the durability that this solution gives to the flooring.**



Top priority benefits valued by the final consumer



Durability was the #1 reason given by consumers when it comes to installing an underlayment.

Results from an online survey recently conducted by Amorim Cork Composites.

Cork or 100 % foam: which underlayment provides greater durability?

Given this need and the wide range of solutions available on the market, why choose a cork underlayment instead of a 100 % foam-based solution?

	Cork 01	Cork 02	Cork 03	Foam
Thickness	1.6 mm	2.0 mm	3.0 mm	3.0 mm
Compressive Creep (CC)* · Load Thickness loss	>50 kPa 11%	>100 kPa 17%	>50 kPa 7.4%	>2 kPa
Dynamic Load (DL)**	>100,000	>100,000	>100,000	>10,000

* EN 16354, ** EN 13793

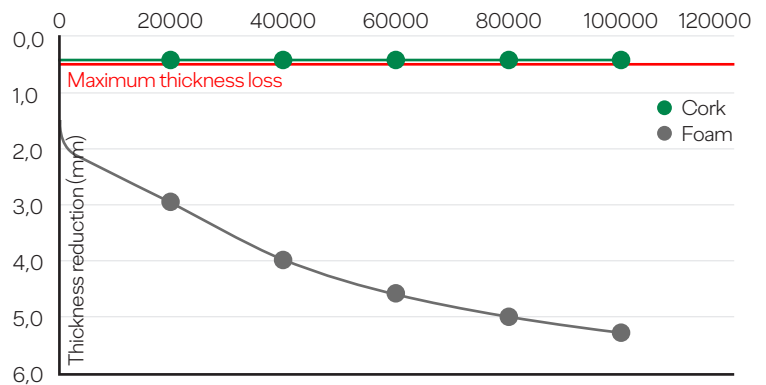
Test #01 · Dynamic Load Test (DL)*

The dynamic load test is a laboratory test that simulates the pressure exerted on the floor by foot traffic, trolleys and office chairs with casters, among others. To be effective, the underlayment must be able to withstand this pressure without losing its absorption characteristics.

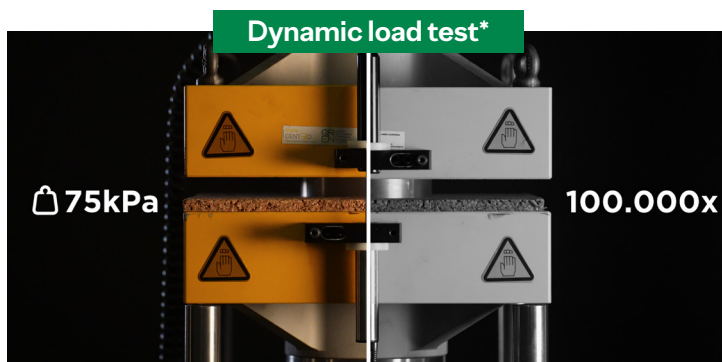
To assess the material performance, we submitted a sample of cork, and another composed entirely of foam, both 10 mm thick, to 100 000 cycles at 75 kPa pressure.

Cork underlayments have shown to have a clearly superior performance when compared to the 100 % foam-based solution, maintaining their characteristics. After 100 000 charge cycles, cork only lost 5 % of its thickness, while foam recorded a loss of 55 %.

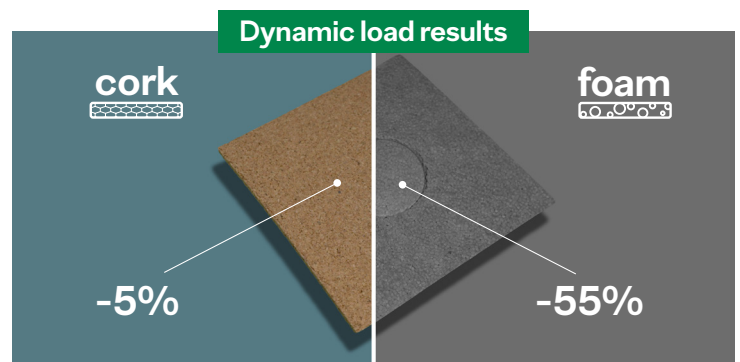
Comparison chart · thickness Loss



Cork is inside the limits, maintaining the initial thickness (-0,5 mm). Foam is complete outsider the limits, losing 3 mm of thickness.



100,000 cycles of high loads - 75kPa



Cork proved to be more resilient, with **just 5% thickness loss** after 100,000 charge cycles.

*tests carried out in independent and certified laboratories.

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Test #02 · Creep Test (CC)*

The creep test determines the weight that can be placed on a given floor over time, using as reference a period of 10 years. We are talking about furniture weight, for example.

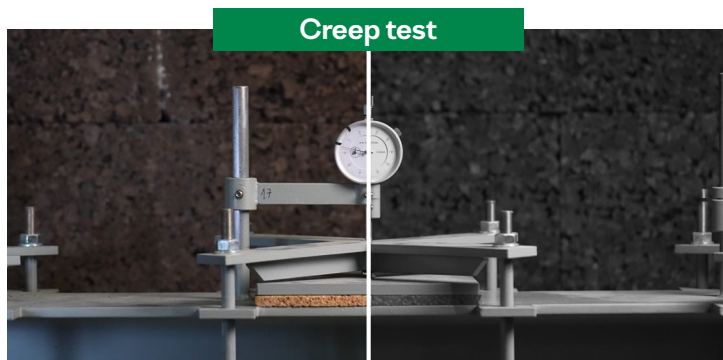
This means that, as it is compressed **over the years, cork maintains its thickness and, consequently, the performance** of the system where it is applied, whereas with foams (PE, XPS, or PP), whenever pressure results in cell breakage, the underlayment loses density and effectiveness.

In a comparative test between a sample of cork and another 100 % foam-based sample, the cork sample revealed to have a higher resistance to compressive creep due to its resilience.

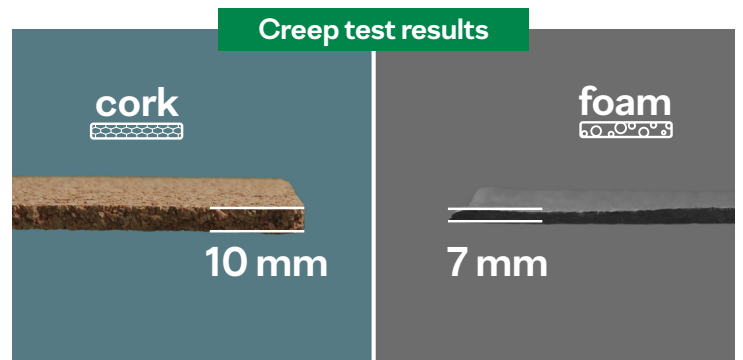
In short, the tests carried out have shown that a cork-based underlayment is the best option to ensure the durability and performance of the flooring for an extended period of time. Therefore, the choice of a cork solution translates into savings for the consumer, thus avoiding the need for early floor replacement. Additionally, with a cork solution, users will be able to enjoy the comfort an underlayment has to offer for years to come, just like on the first day it was installed.



Cork delivers superior performance and shows almost the **same thickness after being compressed**.
Less than 10% of thickness loss.



Illustrative image of a comparison test.



Represents behavior after a few days under 75 kPa.

Protect your investment in the final floor using a cork-based underlayment.

Use cork to preserve all characteristics for long time.



These images are merely illustrative and are only intended to represent the degradation of the pavement after the tests have been carried out.

*test made at i.Cork Factory press (not in accordance with creep standard)

Performance and sustainability

In addition to performance, from an environmental perspective, **cork-based underlayments also represent a more sustainable choice than foam-based solutions.**

According to independent studies conducted by EY consultant, all analyzed Amorim underlayments **have a negative carbon balance** when considering the carbon capture of cork oak forests and production-related emissions. This means that the carbon capture of cork-based underlayments exceeds the CO₂ capture resulting from their production.



Our brands: Acousticork and Go4Cork

Currently, Amorim Cork Composites offers a wide range of underlayments that adapt to all floor types. Whether it is a laminate, wood or ceramic flooring, there is an Amorim underlayment that adapts to your flooring needs, offering a quieter and more comfortable environment.

AcustiCORK[®]
by Amorim

www.acousticork.com

**GO4
CORK**
by Amorim

www.go4cork.com

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