The Natural Blueprint for High-Performance Buildings

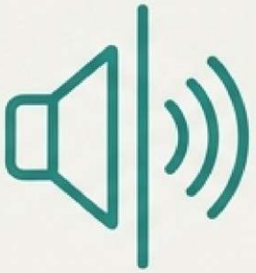
An Introduction to Suberlev® Natural Cork Agglomerate Insulation

The Modern Building Dilemma

Today's building professionals are tasked with solving a complex equation. Projects demand superior performance, but also a commitment to sustainability and occupant well-being.

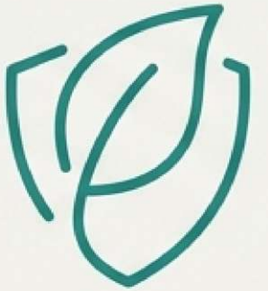
Rising Energy Costs & Efficiency Mandates

How do we create buildings that are exceptionally energy-efficient to reduce long-term operational costs and meet stringent regulations?



The Demand for Acoustic Comfort

How do we design spaces that offer a sanctuary from external noise and ensure privacy and tranquility for occupants?



The Imperative for Healthy Materials

How do we specify materials that are non-toxic, sustainable, and contribute to superior indoor air quality without compromising performance?

Finding a single material that addresses all three challenges without compromise is the ultimate goal.

Nature’s Integrated Solution: Suberlev® Natural Cork Agglomerate

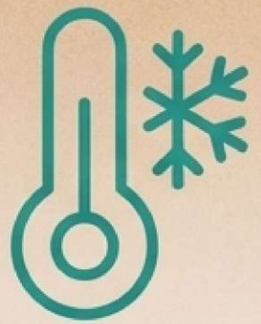
A single, 100% natural material engineered to solve the modern building dilemma.

Suberlev® is an innovative thermal and acoustic insulation system produced by expanding cork granules with steam—with no synthetic agents or additives.

> **It delivers superior performance not by chemical engineering, but through the inherent, remarkable properties of cork.**

The Triple Power of Cork

Suberlev®'s effectiveness lies in three distinct yet interconnected benefits that create healthier, more efficient, and more comfortable buildings.



THERMAL COMFORT

Superior insulation that stabilizes indoor temperatures, dramatically reduces energy consumption, and enhances safety.

ACOUSTIC QUIET

Exceptional sound absorption that creates peaceful, private sanctuaries shielded from unwanted noise.

NATURAL SUSTAINABILITY

A 100% natural, biodegradable material that promotes healthy indoor air and minimizes environmental impact.

These three benefits work in concert, offering a holistic solution for high-performance design.

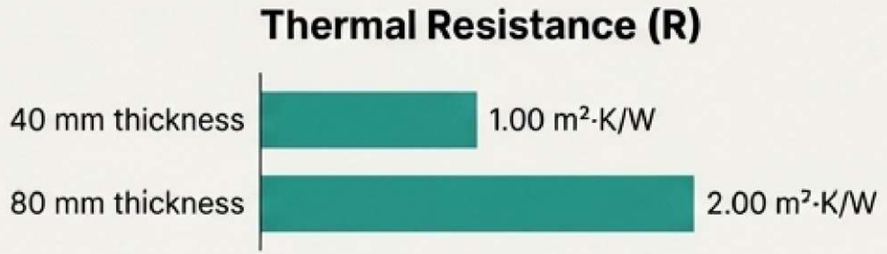
Proof 1: Uncompromising Thermal Comfort & Efficiency

0.04
W/m·K

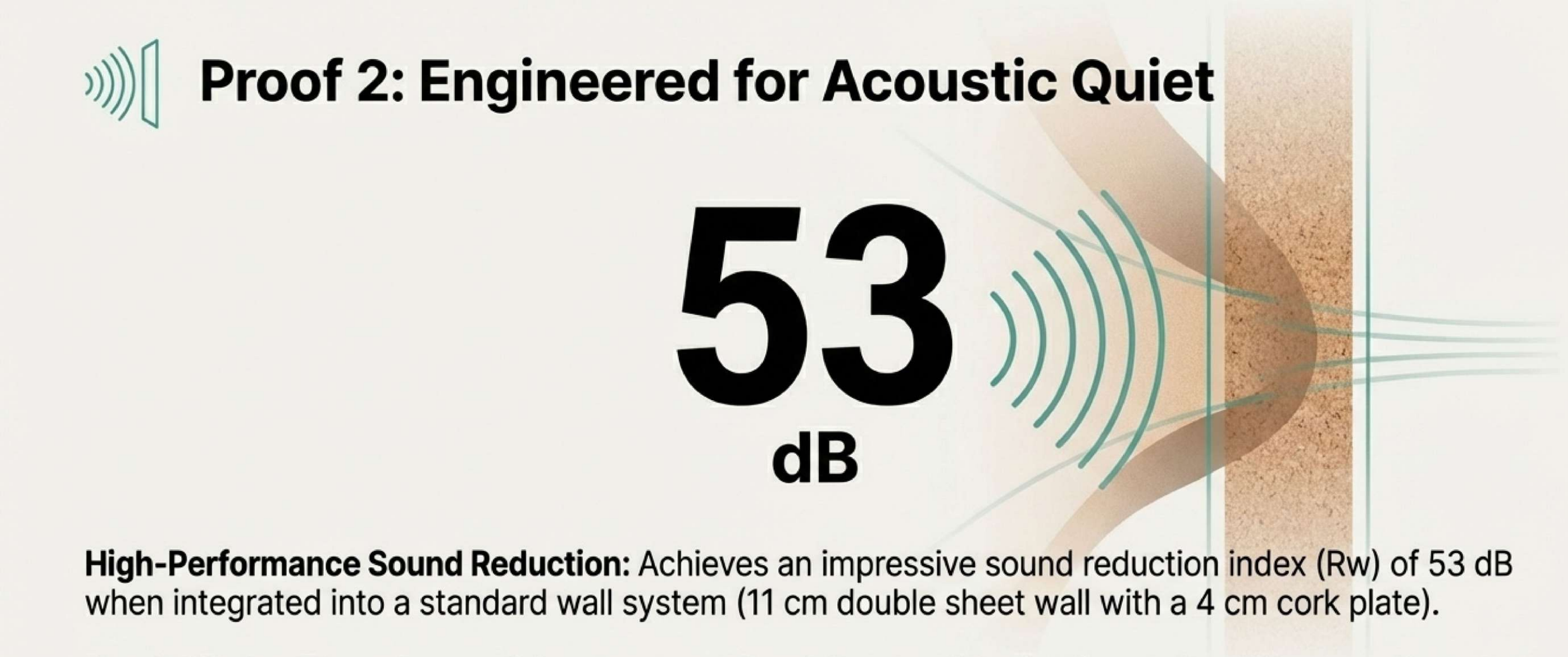
Exceptional Thermal Conductivity
With a low thermal conductivity of 0.04 W/m·K, Suberlev® is highly effective at stopping heat transfer. This keeps buildings warm in the winter and cool in the summer.

Direct Benefit
Optimizes energy efficiency, leading to significant savings on heating and cooling bills for the life of the building.

Critical Safety Feature
In a fire, a 20 cm thickness provides a **13-hour thermal delay**, slowing heat transfer and adding a critical layer of safety.



Proof 2: Engineered for Acoustic Quiet



High-Performance Sound Reduction: Achieves an impressive sound reduction index (Rw) of 53 dB when integrated into a standard wall system (11 cm double sheet wall with a 4 cm cork plate).

How It Works: The unique cellular structure of cork is naturally effective at absorbing sound waves and dampening vibration, reducing noise transmission through walls, floors, and ceilings.

Direct Benefit: Ideal for creating private, peaceful sanctuaries in projects where acoustic comfort is a priority—from residential homes in busy areas to commercial and hospitality spaces.

Proof 3: A 100% Natural & Healthy Choice

Performance derived from purity.

- **Purely Natural Process:** The boards are made simply by expanding cork granules with water vapor. The process uses **zero synthetic agents, glues, or additives**.

- **Breathable & Humidity Control:** A low water vapor resistance factor (5-10 μ) allows the building to ‘breathe.’ This **hygrothermal regulation** prevents trapped moisture, reducing the risk of mold and contributing to healthier indoor air.

- **Safe & Biodegradable:** As a completely natural product, it is fully biodegradable. Critically, it has a Euroclass E fire rating and **does not emit toxic fumes** when exposed to fire, unlike many synthetic alternatives.

Technical Specifications: Suberlev® S.A.T.E. Boards

Certified data for engineering calculations, material specification, and compliance verification.

Table 1: Physical Properties

Composition	**100% Natural Cork**
Dimensions	**500 x 1000 mm**
Thicknesses	**30 / 40 / 50 / 60 / 70 / 80 mm**
Density	**1.1 ± 0.05 g/cm³**
Operating Temperature	**-180 °C to 140 °C**

Table 2: Thermal & Acoustic Performance

Thermal Conductivity (λ)	**0.04 W/m·K** (EN 12667)
Specific Thermal Capacity	**1852 J/(kg.K)**
Sound Reduction Index (Rw)	**53 dB** (in system)

Table 3: Mechanical Performance

Flexural Strength	**≥104 kPa** (DIN EN 826)
Compression Behaviour	**30 kg/cm²** (DIN EN 826)
Dimensional Stability	**14.4%** (DIN 18165-1)

Table 4: Moisture & Fire Performance

Water Vapour Resistance (μ)	**5 – 10**
Fire Resistance	**Euroclass E** (does not emit toxic fumes) (UNE EN 13501-1)

CE Marking: Conforms to standard EN 13170.

Versatile by Nature: Recommended Applications

The unique combination of thermal, acoustic, and mechanical properties makes Suberlev® a superior solution for numerous applications.

Facades and Walls

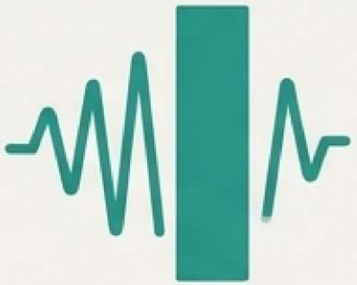
Ideal for high-performance SATE systems where energy efficiency and occupant comfort are paramount.

Flat and Sloped Roofs

Provides robust thermal insulation. Compressive strength strength makes it suitable for walking on with rigid finishes.

Cold Storage & Industrial Spaces

Leverages excellent thermal resistance to maintain stable low temperatures efficiently.



Vibration Isolation

The natural cellular structure is effective for dampening and isolating vibrations in structures.

Sustainable & Ecological Projects

The definitive choice for projects requiring 100% natural, biodegradable, and non-toxic materials.

A Clear Path to Performance: Installation Overview

A 5-step process for achieving specified performance.
Installation must be performed by approved applicators.

1. **Prepare Substrate**
   Ensure surface is clean, completely dry, and repaired.
   Compatible with concrete, wood, metal, EPS/XPS, and more.

2. **Apply Adhesive**
   Spread Thermal Mastic with a notched trowel (~1.2 kg/m² per cm thickness).

3. **Position & Fix Boards**
   Install boards from the bottom up, staggering joints.
   Secure with fixing anchors.

4. **Seal & Level**
   Seal all joints and anchor points with Thermal Mastic.
   Apply 1-2 additional coats to even out the surface.

5. **Apply Final Finish**
   Once the mastic is dry, apply the chosen finishing material (render, paint, cladding).

Key Note: **Substrate preparation is critical.** Surface must be free of dust, grease, and moisture.

The Suberlev® Advantage: Performance, Purity, and Peace of Mind

- **A Singular Solution**: One material delivers elite thermal, acoustic, and sustainable performance.
- **Proven & Certified**: Backed by rigorous testing and compliance with key European standards (CE Marked).
- **Long-Term Value**: Exceptional durability and stability ensure performance for the life of the building, reducing operational costs and enhancing property value.
- **Health-Conscious Design**: A 100% natural, non-toxic, and breathable material that contributes to superior indoor environmental quality.

Specify Suberlev® for projects that demand uncompromising quality.

Help Us Help You

Innovation in Protection.

The information provided is based on extensive practical experience and laboratory testing.
We recommend practical tests to ensure compatibility for each specific application.

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