



STEICO*internal*

The wood fibre insulation board for IWI systems in retrofit



**Suitable
for a wide
range of
projects**

STEICO*internal*: Wood fibre interior insulation



Insulating walls
from the inside

Creating spaces that feel
as good as they look

In many situations, internal insulation can be an appropriate solution – for example where façades need to be preserved, buildings are used for a limited period, or only specific rooms or individual dwellings are being upgraded. Even with relatively small installation thicknesses, STEICO*internal* wood fibre insulation boards can deliver noticeable improvements in thermal performance.

High performance, slim insulation

λ_D 0.038

The lambda value (λ) indicates a material's thermal conductivity and is a key measure of insulating performance. Lower lambda values allow effective thermal performance to be achieved with reduced insulation thickness.



STEICO*internal* wood fibre insulation boards have a declared thermal conductivity of λ_D 0.038 W/m·K, supporting efficient insulation solutions where space is limited.



Saves energy costs
through high energy
efficiency

76 %
improvement
in U-value

Only 60 mm of insulation
for a 76 % improvement
in thermal performance

The U value measures heat loss through the complete wall construction, with lower values indicating improved thermal performance. Unrenovated solid brick walls commonly have U values of around 2.00 W/m²K.

By adding 60 mm of STEICO*internal* IWI, this can be reduced to approximately 0.48 W/m²K, representing an improvement in thermal performance of around 76 %, depending on the build up. *)

STEICO <i>internal</i> al [mm]	U-value [W/(m²K)]	U-value- improvement [%]
with internal insulation		
100	0.32 ^{*)}	84 ^{*)}
80	0.38 ^{*)}	81 ^{*)}
60	0.48^{*)}	76^{*)}
40	0.65 ^{*)}	67 ^{*)}
Existing masonry		
	2.00	

*) U-value calculations are based on design thermal conductivity values applicable to UK conditions.

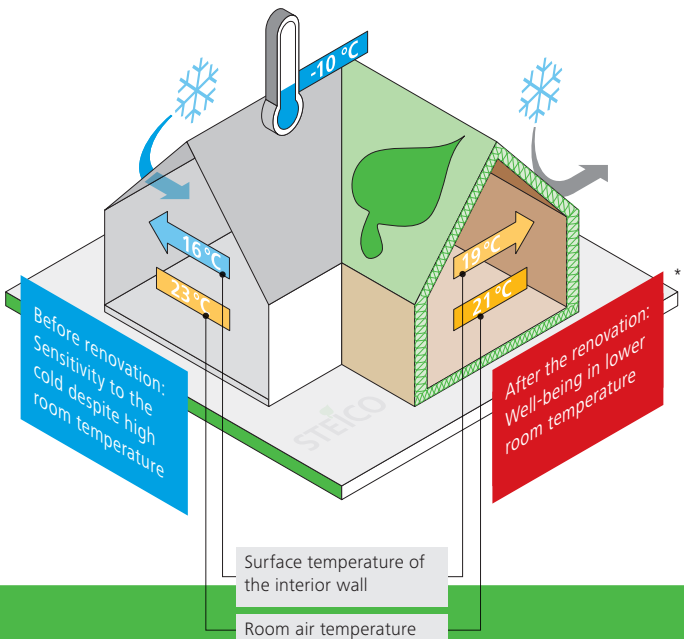
Warm walls = a cosy atmosphere



Cold stays outside,
interior walls stay
warm

Indoor comfort is influenced not only by air temperature, but also by the surface temperature of walls. In uninsulated buildings, cold internal wall surfaces can contribute to a feeling of discomfort, even when rooms are heated. Internal insulation systems using STEICO*internal* wood fibre boards can help raise internal wall surface temperatures, supporting improved comfort within living spaces. In some cases, this may also allow similar comfort levels to be maintained at lower room temperatures, potentially reducing heating demand.

*) Source: vdnr e.V. Timber Construction Handbook "Internal Insulation with Wood Fibre Insulation Boards" (Series 4, Part 5, Issue 4); page 7 [based on Frank W. (1975), Reports from Building Research – Indoor Climate and Thermal Comfort. Berlin-Munich-Düsseldorf: Ernst & Sohn KG]



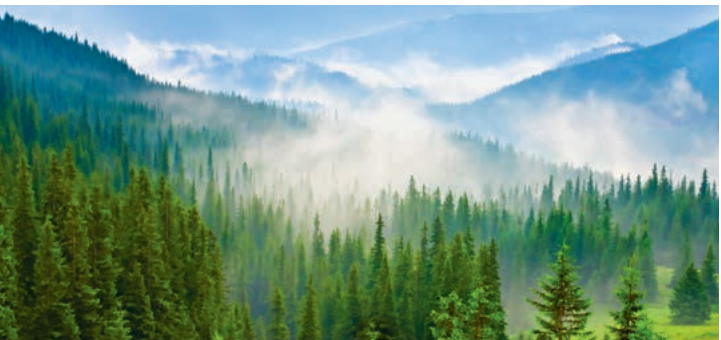
IWI using bio-based materials

STEICO*internal* wood fibre insulation boards are manufactured using the wet production process, in which the wood's own lignin is used as a binding agent in the boards.



Untreated softwood is used in the manufacture of STEICO insulation materials. The wood comes from sustainably managed, PEFC-certified forests in the vicinity of the STEICO production plant.

The independent Institut für Building Biology in Rosenheim GmbH (IBR) has set itself the goal of identifying healthy and environmentally friendly building products for consumers with its seal of approval. STEICO*internal* insulation boards bear this recognised quality mark for a healthy living environment.

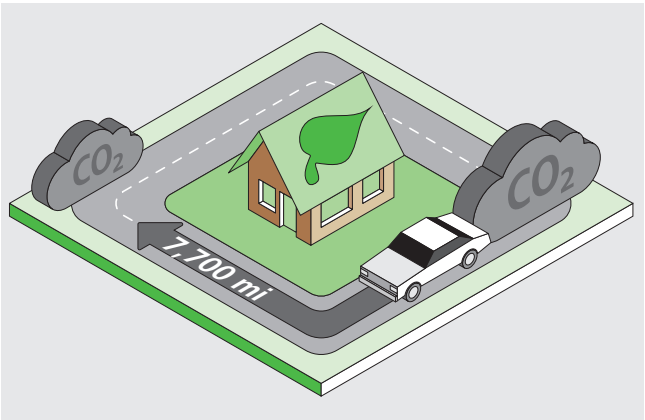


STEICO*internal* reduces CO₂ emissions and stores CO₂



The carbon contained within STEICO wood fibre insulation materials is absorbed by trees during growth and remains stored in the wood over the long term. In addition, the use of wood fibre insulation can help reduce heating energy demand, which may in turn lower associated CO₂ emissions.

Each cubic metre of STEICO*internal* binds 270 kg CO₂ eq**



As an illustrative example, 100 m² of 60mm internal insulation stores an amount of CO₂ comparable to that emitted by a small car*** driven approximately 7,700 miles, based on standard assumptions.

*) Storage refers to CO₂ equivalent in life cycle phase A1 according to EN 15804+A2

**) Calculation according to EN 16449, life cycle stage A1 according to EN 15804+A2

***) 6,400 kg; a small car emits an average of 130g/km (source: co2online.de)

Compatible with a wide range of renders

A range of internal plaster finishes can be used with wood fibre internal wall insulation systems. Suitable options include mineral and lime-based plasters and other vapour-open finishes that support breathable constructions and can contribute to a healthy indoor environment.

Internal plaster systems are typically applied over a suitable basecoat and can help regulate moisture levels, reduce surface condensation risk, and support good indoor air quality. Finishes can be selected to achieve the desired appearance and performance while working in harmony with the insulation and wall build-up.

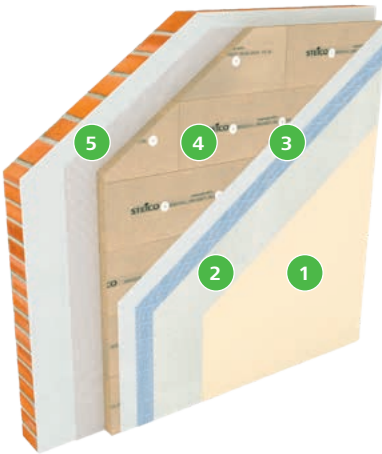
The chosen plaster system should always be compatible with the wood fibre insulation and overall construction. Details of suitable plaster types and system build-ups should be confirmed with the relevant system supplier to ensure effective and durable performance. For more information contact support@steico.com.

Towards structural safety

When used as part of an internal wall insulation system, STEICO*internal* wood fibre insulation boards are combined with a mineral or lime based plaster that is vapour permeable and capillary active. This build up supports moisture movement within the wall, allowing humidity to be absorbed, temporarily stored, and released, which can help maintain balanced indoor conditions.



Vapour-permeable
and capillary-active



IWI build-up from the inside:

- 1 Compatible finish
- 2 Approved topcoat
- 3 Reinforcement mesh
- 4 STEICO*internal* wood fibre insulation board
- 5 Approved bonding coat

Affordable and easy to use

Internal insulation using STEICO*internal* can be installed without the need for scaffolding or cranes. As the work is carried out from inside the building, installation is less affected by external weather conditions and can generally be undertaken throughout the year. The boards are easy to handle and transport, supporting installation even in restricted or confined spaces.



Easy to transport,
install all year round



Help reduce thermal bridges with system accessories

The STEICO product range is complemented by solutions for every detail: the STEICO*base* wood fibre insulation board, just 20 mm thick, for window reveals; and, where required, the wedge-shaped STEICO*tri* for edge insulation at the junctions of internal walls and ceilings.



STEICO*base* for window reveals



STEICO*tri* for side insulation

Ideal for retrofitting wall heating

Internal insulation using the STEICO*internal* insulation board can be easily combined with various underfloor heating systems.

Responsible for content

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