INSTALLATION WORK IN PRACTICE

INTERIOR INSULATION IN WOOD FRAME CONSTRUCTION

1. Set up frame:
Erect a supporting structure consisting of vertical wood posts on the wall to be insulated. The distance between the posts should not be greater than 80cm.

2. Covering:
Permeable material or vapour retarders are mounted on the substructure and sealed wind-tight.

3. Blowing procedure:
The cellulose insulation is then blown in seamlessly and can settle without sagging. As a rule, insulation thicknesses of 1-12 cm are installed.

4 Facing the inside of the room either dry construction boards of plaster are mounted or permeable plaster on plaster baseboard is used.

SOLUTION INTERIOR INSULATION

CAPILLARY-ACTIVE WITH CELLULOSE

ISOCELL

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REFERENCES

Oberluech farm in Kirchbichl

The former coach station with inn dating from 1528 was found to be in poor condition.

EnergiePlusHouse Weber

As the existing façade of natural stone on the ground floor was to be retained from an architectural viewpoint, conventional exterior insulation was avoided in this area.

To achieve a seamless insulation on the rough surface of natural stone, interior insulation with ISOCELL cellulose was used.

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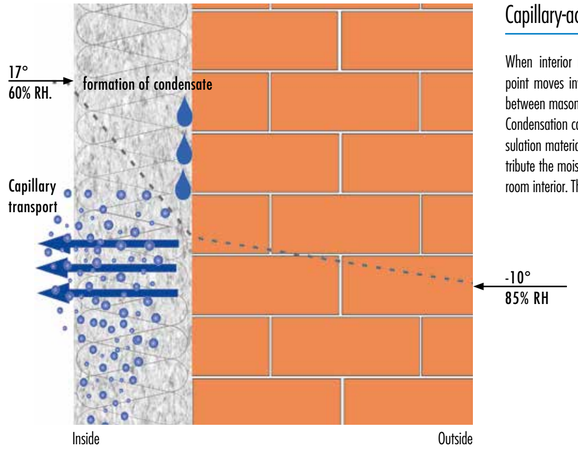
THE INTERIOR INSULATION PRINCIPLE



Capillary-active interior insulation

When interior insulation is applied, the dew point moves inwards. Usually to the boundary between masonry and insulation.
Condensation can form there. Capillary-active insulation materials such as ISOCELL cellulose distribute the moisture and transport it back to the room interior. There the moisture can dry out.

OLD HOUSES: APPEALING BUT UNCOMFORTABLE?

Old buildings which are not insulated are high in running costs and are yet not comfortable. The outer façade of listed buildings can often not be changed. For this reason, thermal insulation is possible only inside.

ISOCELL offers the solutions for this: with interior insulation in wood frame construction the cellulose is blown directly into the prepared cavities. The cellulose felts to make a seamless insulation mat that does not sag.

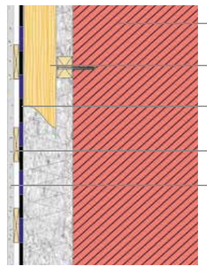
Advantages

- The surface temperature rises
- Rooms become more cosy
- Rooms become warm more quickly
- Improved sound insulation
- Energy-saving - reduction of heating costs
- Masonry stays dry
- The building's value increases
- Breathable and vapour permeable
- A natural raw material

SOLUTIONS IN DETAIL, TECHNICAL DATA

INTERIOR INSULATION IN WOOD FRAME CONSTRUCTION

Brick wall construction

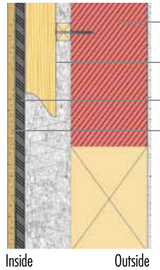


Material	Thickness of layer (mm)	λ (W/m K)	Fire classification (EN)
Brick	240	1	A1
Wooden construction / ISOCELL Cellulose	80	0,13 / 0,038 od. 0,039 (D)	D / B-s2, d0
Vapour-barrier ISOCELL AIRSTOP DIVA	1	0,2	E
Open formwork	24	0,13	D
Gypsum plasterboard	12,5	0,21	A2

Insulation thickness (mm)	Insulation density (kg/m³)	PHI (Phase shift in hours)	U-value (W / m² K)
80	50	13,0	0,404
100	50	13,7	0,342
120	50	14,5	0,297

Insulation thickness from 160mm is evaluated from case to case. technik@isocell.at

Timber frame construction



Material	Thickness of layer (mm)	λ (W/m K)	Fire classification (EN)
Half-timbered wall	120	1 / 0,13	A1 / D
Wooden construction / ISOCELL Cellulose	80	0,13 / 0,038 od. 0,039 (D)	D / B-s2, d0
Wood-wool slab	35	0,09	B-s1, d0
Clay plaster	20	0,73	A1

Insulation thickness (mm)	Insulation density (kg/m³)	PHI (Phase shift in hours)	U-value (W / m² K)
80	50	9,8	0,390
100	50	10,3	0,332
120	50	10,9	0,289

Insulation thickness from 160mm is evaluated from case to case. technik@isocell.at